A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music

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Not everything that is faced can be changed;

but nothing can be changed until it is faced.

- James Baldwin, American author

ABSTRACT

A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music

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Providing opportunities for students to participate in music as part of a comprehensive education remains a core value of American education. However, the small proportion of school music participants suggests that existing music programs may not be serving all students. The purpose of this sequential explanatory mixed methods study was to investigate those factors and barriers associated with students' decisions not to participate in school music programs, with an emphasis on the experiences of students from underserved populations. This investigation was guided by the expectancy-value and constraint negotiation theories related to activity choice behaviors. Constraint negotiation, from leisure sociology, posits that participation in any activity is the result of successfully navigating constraints, and when constraints become barriers, nonparticipation results. In the first, quantitative phase of the study, data were collected from students in a Midwestern high school ($N = 319$). Quantitative results indicated seven predictors of school music participation and nonparticipation in a logistic regression model: race/ethnicity, free or reduced lunch status, perceptions and attitudes toward school music, musical task difficulty, and personal perception, conflicting activity, and school music structural constraints. In the second, qualitative phase of the study, an instrumental collective case study ($N = 12$) was used to examine student nonparticipation. Data were collected through interviews, transcripts, observations of music classes, interviews with music teachers, field notes, and artifacts. Qualitative

results revealed five cross-case themes: nonparticipant musicians, choice as a hierarchy of personal values, school music as a closed system, the power of personal perceptions, and a desire for student-centered pedagogy. A connected mixed methods analysis identified areas of convergence and divergence between the quantitative and qualitative data that primarily confirmed the statistical analysis. Based on these results, a preliminary model of school music constraints was developed to explain student experiences with school music. The results suggested that recognizing the barriers to school music participation and implementing student-centered pedagogical practices may assist in the engagement and sustained participation of more students in school music. Further research exploring constraint negotiation is recommended to develop a greater understanding of the experiences of both school music participants and nonparticipants.

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CHAPTER ONE: INTRODUCTION TO THE STUDY

Providing opportunities for students to participate in music as a part of a comprehensive public education remains a core value of the educational system in the United States. However, one of the problems facing music education is the small percentage of students who enroll in school music courses at the secondary level. Within this small pool of music participants, many student populations are often underrepresented, making it clear that existing music programs may not be serving all students. Music education, originally conceived as a mandatory requirement for all students in American public schools, has become elective coursework in the majority of secondary schools in which only a minority of students chooses to participate.

The high value placed on music in colonial society led to its adoption as a curricular subject in American public schools (Mark & Gary, 2007). Rising out of the need to provide "a formal system of music education for the masses" (p. 68), singing schools developed in New England to improve the quality of music in religious worship. In Boston, where singing schools and congregational choirs were common, the societal value placed on music led to petitions for its inclusion in the common schools. In the fall of 1937, Lowell Mason volunteered to teach music in the Hawes School for Boys and Girls (p. 160). Following a successful exhibition concert at this school in August of 1938, the Boston School Committee approved a motion to hire a vocal music teacher, thereby making music part of the curriculum. Soon, this trend spread to schools in other communities across the country, from New York City, Baltimore, and Washington, DC in the northeast to Lexington, Kentucky and Zanesville and Cincinnati, Ohio to the southwest.

As schooling expanded and high schools became common in the late nineteenth century, four-part choral singing became part of the required coursework (Mark & Gary, 2007). Other music courses (e.g., music appreciation, instrumental ensembles, history, and theory) began to appear as extracurricular options in schools around the turn of the 20th century, and later became part of the music curriculum. In 1912, the Music Supervisors National Conference (MSNC) established the practice of granting credit for school music coursework, awarding "full credit for music courses requiring homework, and laboratory (one-half) credit for rehearsals" (p. 291). As curricular music courses increased, school music programs changed from requiring vocal music in high school to offering a slate of music electives. Shortly thereafter, high schools decreased the four-year music requirement to just one year. "In time, high school music became an activity of a minority of the student body. MSNC did not deal with this issue until the 1960s" (p. 292).

Even though MSNC (later MENC, the Music Educators National Conference and now NAfME, the National Association for Music Education) did not officially take action on the issue of low student enrollment in school music programs until the Tanglewood Symposium in 1967, the organization has long held the belief that every child deserves music (Heidingsfelder, 2014). The phrase "Music for Every Child, Every Child for Music" was selected as the theme for the 1923 MSNC meeting and has persisted as a guiding principle throughout the history of the organization. Today, the current NAfME mission statement proclaims that "every individual should be guaranteed the opportunity to learn music and to share in musical experiences" and music education shall be advanced "by encouraging the study and making of music by all" (National

Association for Music Education, 2014). However, the debate regarding the extent to which that maxim holds true has existed nearly as long as the motto itself.

While the existence of music programs in schools provides opportunities for musical experiences, the presence of these programs does not guarantee that all students have equal access to music. Chenault (1993) discovered that disparities in performing ensemble participation existed between students of various ethnic groups at the high school level, even in schools with a large percentage of minority students. Explicating the differences that exist between students who participate in school music and those who do not has long been a central question in music education research (Corenblum & Marshall, 1998; Costa-Giomi & Chappell, 2007; Elpus & Abril, 2011; Fitzpatrick, 2012; Hallam, 1998; Kinney, 2008, 2010; Klinedinst, 1991; McCarthy, 1980; Morehouse, 1987; Rawlins, 1979; Stewart, 1991; Wolfle, 1969), yet little study has focused directly on students who do not participate in school music programs.

Background of the Study

Low student participation in school music programs is not a new problem in music education, and many of the underlying causes remain problematic today. In a presidential address delivered to the Music Supervisors' National Conference, Miessner (1924) stated that 60% of the children enrolled in school were not receiving music. While this figure may be inflated (it was assumed that schools failing to return a 1922 survey regarding their music programs did not offer music), it demonstrates that the roots of low music participation run deep. Miessner reminded educators why music was necessary for every child in school: "The vast majority of children who possess musical talent cannot afford the luxury of private instruction; they are compelled to go music-

hungry through life because the schools deny them the privilege of music training on the same basis with other studies" (p. 54).

Forty years later, the small number of high school students participating in music programs was included among the critical issues discussed at the Tanglewood Symposium of 1967. Convened by MENC, the symposium brought together a broad cross-section of individuals from music, education, science, corporations, and government to consider issues related to the theme "Music in American Society." Four critical issues in music education were identified: "music and the inner city, music study for all students in the senior high schools, music for the child who is three to eight years of age, and music for teenagers" (Choate, 1968, pp. 132-133). It is noteworthy that three of these issues were related to secondary school music. The report's statements regarding low student enrollment in secondary school music and its critique of secondary music courses contained themes that are manifest in contemporary music education. Regarding low student enrollment in secondary school music, the committee wrote:

> Because of existing academic pressures, college entrance requirements, and rigid scheduling, less than twenty percent of high school students in the United States are engaged in the systematic study of music as an art. The need for aesthetic experience is a basic characteristic of human life that education at every level is obliged to meet. (Choate, 1968, p. 132)

The committee report stated that required music courses at the secondary level "seldom challenge" (p. 133) students and recommended that MENC "promote a greater recognition of music education's importance for the 'non-performing' student and to further an understanding of appropriate materials and strategies of instruction by music

educators at the senior high school levels" (p. 132). The report concluded that, "The problem is crucial for all economic and ethnic groups in school throughout the United States. Action must be initiated immediately" (p. 133).

Despite this call for immediate action, research has since revealed that student enrollment in secondary school music has changed little since Tanglewood (Kratus, 2007; Reimer, 1994; D. A. Williams, 2007, 2011; D. B. Williams, 2007, 2012). Reimer (1994) stated that 15% of American students participated in musical performance activities, despite the fact that they had no intentions of pursuing music as a career. However, this figure, taken from a national survey of school band participation by the Yamaha Music Corporation published in 1993 (as cited in Reimer), did not include choral and orchestral participation. D. A. Williams (2007) claimed that the number of students who dropped out of music performance courses in school was "shown to be in the neighborhood of 50 percent" (p. 20), but he based this figure on research exclusively in instrumental music. Kratus (2007) also cited a dropout rate of 50% from music courses for students in California schools between 1999-2004. D. A. Williams (2011) claimed that because many students are "double counted (concert band and jazz band, for example)" (p. 51), music enrollment figures may actually be lower than reported. D. B. Williams (2007, 2012) reported that the average number of students who did not participate in school music programs was around 80%.

Several music education researchers have identified the beneifts of musical participation in the education and development of children and adolescents. Musical participation has long been linked to academic achievement (Elpus & Abril, 2001; Kinney, 2008; Klinedinst, 1990; Mawbey, 1972; Young, 1971). Fitzpatrick (2006)

reported that instrumental music students not only scored higher than nonparticipants in standardized tests, but music students from disadvantaged socioeconomic backgrounds outperformed nonparticipants of higher socioeconomic status by high school in all subjects. Students in high-quality school music programs scored higher on standardized tests than students programs of lower quality programs, regardless of socioeconomic level (Johnson & Memmott, 2006). In summarizing the results of four longitudinal studies on arts participation among at-risk youth, Catterall (2012) reported that arts involvement was associated with higher academic achievement, graduation rates, and bachelor's degree completion and also resulted in increased civic-minded behaviors, such as volunteerism.

In addition to academic outcomes, O'Neill (2005) described the importance of musical participation as a means of self-expression and identity development among adolescents. O'Neill stated, "music can be a powerful social, cultural, and national symbol that serves particular functions in the socialization and enculturation of young people" (p. 260). Several authors have reported the benefits of music in satisfying the emotional needs of adolescents, such as altering their moods or expressing strong emotions (North, Hargreaves, & O'Neill, 2000; Sloboda, 2001; Sloboda & O'Neill, 2001) Adolescents believed involvement in school music programs provided a place for socialization and building close relationships with peers (Adderley, Kennedy, & Berz, 2003).

Other researchers have articulated aesthetic and biological benefits of arts and music education. Winner (2000) believed that the importance of arts education was in teaching children to appreciate great works of art "for the mind's sake" (p. 29):

> The two most important reasons for studying the arts are to enable our children to be able to appreciate some of the greatest feats humans have ever achieved (e.g., a painting by Rembrandt, a play by Shakespeare, a dance choreographed by Ballanchine, a sonata by Mozart) and to give our children sufficient skill in an art form so that they can express themselves in this art form. (p. 29)

Brain researcher Eric Jensen argued the human brain was wired for music, writing, "Music is part of our biological heritage and is hard-wired into our genes as a survival strategy" (2001, p.15). If, as Jensen claims, music making is a part of our neurobiology, one could argue that access to music for all students, as a part of a comprehensive education, is one of our most basic, primal necessities.

Using data from government educational studies, researchers have constructed demographic profiles to describe the secondary school music student population of the United States and found that students who participated in these programs were not a representative subset of the national school population (Elpus & Abril, 2011; Stewart, 1991). Using data from the National Center for Educational Statistics' (NCES) *High School and Beyond* national longitudinal survey, Stewart (1991) found that only 30.9% of seniors participated in school music programs in 1982. She reported that students enrolled in high school music courses were more "socially advantaged and academically oriented" (p. 137) than those who were not. Stewart found that students who were more likely to participate in high school music programs were female, affluent, academically motivated, involved in music lessons prior to high school, or participants in extracurricular activities other than sports.

Elpus and Abril (2011) also used NCES data to create a national demographic profile of secondary school music participants as an update to Stewart's (1991) study. Utilizing data from the *Educational Longitudinal Survey*, Elpus and Abril found that 21% of high school seniors in the class of 2004 participated in school music ensembles, down nearly 10% from Stewart's figures. They also discovered disparities between students who participated in music and those who did not. Student groups significantly overrepresented in school music programs were as follows: females, native English speakers, White students, children of parents with postsecondary degrees, students from higher socioeconomic backgrounds, those in the highest quartile of standardized test scores, or students with grade point averages from 3.01 to 4.0. Student groups significantly underrepresented in school music programs included the following: males, English language learners, Hispanic students, children of parents with a high school diploma or less, those in the lowest economic quartile, those in the lowest quartiles of standardized test scores, or students with grade point averages from 0 to 2.0.

Studies conducted in school settings have confirmed that some of the characteristics found to be significant in nationwide studies were also significantly associated with music participation at the school level. These variables included academic achievement (Elpus & Abril, 2011; Fitzpatrick, 2006; Kinney, 2008, 2010; Klinedinst, 1991; Mawbey, 1973; Stewart, 1991), gender (Elpus & Abril, 2011; Kinney, 2010; Stewart, 1991), socioeconomic status (Corenblum & Marshall, 1998; Kinney, 2010; Klinedinst, 1991), and family structure (Kinney, 2010). Researchers specifically focused on the recruitment and retention of students in urban settings discovered that the lack of financial support and parental involvement negatively affected student enrollment

in music (Costa-Giomi & Chappell, 2007). In low socioeconomic schools, Albert (2006) discovered that students' perceptions of the cultural relevance of the ensemble influenced their decisions to participate (i.e., students wanted to participate in ensembles that performed musical styles and traditions reflective of their culture.) McCarthy's (1980) examination of student dropout rates in instrumental music found that reading test scores, sex, and socioeconomic status were significant predictors.

The NCES Common Core of Data figures show that the demographics of American public schools are changing in dramatic ways. Student populations identified as underserved and overrepresented in school music programs are actually trending in opposite directions when compared to overall school demographics nationwide. Students from populations identified as underserved by school music programs (e.g., Hispanic or low socioeconomic status) are increasing in the overall school population, while students from populations identified as overrepresented in school music programs (e.g., White) are decreasing. Between Fall 2000 and Fall 2010, the number of public school students in pre-kindergarten identifying as White through twelfth grade decreased from 61% to 52%, while the number of Hispanic students increased from 16% to 23% (U.S. Department of Education, 2014). The number of school-age students living in poverty increased from 15% to 21% from 2000 to 2011 (U.S. Department of Education, 2013b), and the number of English language learners increased from 9% to 10% from 2002 to 2011 (U.S. Department of Education, 2013a). Projections suggest that these demographic shifts in the student population will continue. Between Fall 2012 and Fall 2023, the number of White students is projected to decrease to 45%, while the percentage of Hispanic students is expected to increase to 30% (U.S. Department of Education, 2014).

Taken together, research in music participation and population statistics suggest that, if school music only continues to involve only the populations it currently serves, student participation may continue to diminish unless school music programs are remodeled to meet the needs of students from diverse backgrounds. Based on music participation data in Florida, D. A. Williams (2011) projected that the state's high school music enrollment would fall below 7% by 2025 if the trend of decreasing enrollment were to continue at the same rate. Low enrollment in music programs, if they were to materialize, might pose a threat to the viability of music education in schools. Many researchers have considered how schools could effectively modify or transform their music programs to connect with a more diverse array of students. What has not been extensively examined, and may potentially hold the best information and perspective from which to study this problem, are the students who currently do not participate in their school music programs.

Problem Statement

Several authors have noted that instrumental and choral ensembles are the primary focus of secondary school music programs (Abril & Gault, 2008; Reimer, 2004; Schuler, 2011). D. B. Williams (2007) called the structure of school music programs an "inverted pyramid of musical experiences" (p. 1), where the nature of the musical experience and the students served vary widely from the beginning to the end of a student's years in school. Participatory music experiences are provided for all students at the elementary level, with student participation diminishing as musical experiences become more specialized in middle and high school, where course offerings consist primarily of performance ensembles. Some researchers have problematized the

traditional ensemble model as an antiquated form of music education that is no longer relevant and fails to serve the needs of the current student population (Kratus, 2007; D. A. Williams, 2007, 2011; D. B. Williams, 2007). Kratus (2007) claimed that music educators have perpetuated a primarily "autocratic model of teaching" (p. 46), using music that is only studied in school, rather than engaging students in creative musical processes (e.g., composing or arranging) or using musical styles that students find personally meaningful. D. A. Williams (2007, 2011) suggested that music courses in which students use technology, learn nontraditional instruments (e.g., guitars or iPads), and work in small group settings guided by the teacher may be more attractive to students than current ensemble offerings. D. B. Williams (2007) proposed that a combination of creative music making and the use of technology might be a key to engaging students currently not enrolled in school music.

Researchers have recommended nontraditional approaches to music education as a method for bridging the gap between students' musical lives, influences, and preferences and the music they encounter in school. Recent scholarship on popular music argues for authentic practices in schools, based on the ways that popular musicians learn. Green (2002, 2008) advocated for methods of instructional pedagogy in which teachers facilitate students' explorations of music making, rather than directing musical learning. Snead (2010) focused on the dichotomous relationship between music inside and outside of school, finding that the structure of formal music learning may not be connecting with students' experiences outside of school. Hebert (2009) argued that the aesthetic approach of school music programs (i.e., studying Western art music to appreciate its inherent

artistic value) has failed to connect with the music that dominates society outside of school (e.g., popular music) and, therefore, has failed to connect with students.

Researchers investigating the gap between students' musical experiences inside and outside of school have suggested the need for school music related to students' cultural heritage. As school populations become more diverse, researchers are beginning to examine issues of cultural relevance in music education. Abril (2003) suggested that teachers should not only be aware of the demographic shifts in their school populations but should develop an "in-depth knowledge and understanding of students' cultures" (Abril, 2009, p. 89) to inform their teaching. He proposed that teachers reconsider their courses, musical selections, and instructional pedagogy in order to provide opportunities for all students to engage in school music programs. Questions concerning what and how to teach lie at the heart of *culturally relevant pedagogy* (Ladson-Billings, 1995a, 1995b), an approach to instruction focused on academic achievement that fosters students' "cultural competence" (p. 474) and develops the skills to critically examine social structures. Based on these ideals, music education researchers have recently advocated for *culturally responsive pedagogy* (Abril, 2009; Fitzpatrick, 2012; Horne, 2007; Shaw, 2012; Sleeter, 2001), which promotes the inclusion of practices and materials that authentically address and foster respect for cultural and racial diversity within school music contexts, including diversifying the genres of repertoire studied and the types of courses offered.

The expansion of school music programs to include a diverse array of musical experiences may provide more opportunities for students, but a number of challenges make the implementation of such new programs difficult. Elementary and secondary

principals identified four factors that had a negative impact on their school music programs: budget, scheduling, No Child Left Behind legislation, and standardized testing (Abril & Gault, 2006, 2008). Principals reported budgetary challenges (e.g., decreased educational funding and the need for schools to implement unfunded mandates) made it difficult to subsidize existing school music programs (Abril & Gault, 2006, 2008). This economic reality might make it impossible to introduce new music courses, despite the desire of school officials to do so. Even if school music programs were able to become more responsive to the needs of students, this would not guarantee that those populations currently underserved by music programs would participate to a significantly greater degree. Elementary and secondary principals cited No Child Left Behind and standardized testing as having the most negative effects on music programs in their schools due to the emphasis on tested subjects and the pressure to increase student achievement in these specific disciplines (Abril & Gault, 2006, 2008).

While the idea of serving more students through diverse musical offerings is attractive, the extent to which these programs would attract and serve new populations of students is uncertain. It is difficult to predict the needs of students who currently do not participate in school music, as this population has been the focus of little direct empirical study. As suggested by past research literature, there are likely many reasons that students choose not to participate in music at school. The examination of school music programs in the United States has revealed a number of factors that are related to the enrollment and retention of music students, but what remains unknown are the reasons why "the other 80%" (D. B. Williams, 2007, para. 5) of students are not involved in school music. Researchers have explored various theories regarding low student

participation and underserved populations, yet the underlying factors that explain nonparticipation remain largely unexplored.

The number of theories about how best to engage students in musical experiences at school suggests that there may be multiple solutions to the problem of low enrollment. However, these studies focused exclusively on the structure of school music programs, including the types of courses offered, the instructional pedagogies used, the styles of music studied, and the music making experiences provided. Many of these practices have not yet been tested to determine their effectiveness in increasing student enrollment or the degree to which alternative practices and programs engage students from underserved populations. Therefore, the question remains: how do we connect more students with music as a part of their secondary education? To answer this question effectively, we must first learn more about those students who currently do not participate in their school music program and the reasons they choose not to participate. The student-level focus on this study provided an opportunity to expand on the results of previous research to determine whether, and how, school music structural factors might influence students' decisions regarding their participation in school music programs.

Purpose of the Study and Method

The purpose of the present, mixed methods study was to investigate those factors and barriers that were associated with students' decisions not to participate in school music programs with a particular emphasis on the experiences of underrepresented students who do not join such programs. An explanatory sequential (QUAN → qual) mixed methods design (Creswell & Plano-Clark, 2011) was used, in which quantitative data were collected and explained by the qualitative data. The quantitative methods in

the first phase provide the theoretical drive for this study (i.e., designated by the uppercase notation "QUAN"), followed by the qualitative methods in the second phase (i.e., designated by the lowercase notation, "qual") that provide a greater understanding of the quantitative results (Morse, 1991).

In the first phase of the study, quantitative data were collected from students in a Midwestern high school to determine what underlying factors contributed to their decisions not to participate in school music. The researcher used these data to test the theory of constraint negotiation, which suggests that activity participation is the result of successfully negotiating obstacles (Crawford, Jackson, & Godbey, 1991; a detailed presentation about constraint negotiation will be provided later in this chapter). The second, qualitative phase of this investigation was conducted to help explain the quantitative results. To fulfill this purpose, semi-structured interviews explored nonparticipation in school music with 12 participants at the selected high school. A detailed description of the methods used in this study will be presented in Chapter Three.

Quantitative Research Questions

The quantitative portion of the present investigation focused on the following primary research questions:

1. What are the musical and non-musical characteristics of students who participate and those who do not participate in the secondary school music program?

   Hypothesis: Students from underrepresented groups identified in previous research (Elpus & Abril, 2011; Kinney, 2010; Stewart, 1991) will be less likely to participate in the secondary school music program.

2. How do nonparticipating students' perceptions of music inside and outside of school influence their participation in musical activities?

   Hypothesis: Student perceptions regarding the interest, importance, and utility (e.g., subjective task values) of music inside school are different from those for music outside of school (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010).

3. What barriers and other factors contribute to student nonparticipation in secondary school music programs?

   Hypothesis: The inability to negotiate intrapersonal, interpersonal, and structural constraints (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, Crawford, & Godbey, 1993) results in student nonparticipation in secondary school music.

Qualitative Research Questions

The qualitative phase of the present investigation will focus on the following primary research questions:

1. What reasons do students give for not participating or discontinuing their participation in school music programs?
   a. How do perceived barriers and other factors affect students' decisions not to participate in school music programs?
2. What revisions to current secondary school music programs might engage a larger percentage of the student population?

Mixed Methods Research Question

The primary mixed methods research question is:

1. In what ways do students' reasons for nonparticipation in secondary school music provided in the qualitative interview data help to explain the quantitative results regarding nonparticipation reported in the surveys?

Theoretical Perspective

Little music education research has directly focused on the factors that underlie students' decisions not to participate in school music programs, though researchers in related fields have developed theories to explain how students make choices regarding the activities in which they choose to engage. The researcher in the present study selected two theoretical frameworks, the expectancy-value theory from educational psychology, and constraint negotiation theory from leisure sociology, to explore participation and nonparticipation in school music. The *expectancy-value* theory (Eccles, 2005; Eccles et al., 1983; Eccles et al., 1989; Eccles, O'Neill, & Wigfield, 2005; Eccles & Wigfield, 1995; Eccles, Wigfield, Harold, & Blumenfeld, 1993; Wigfield & Eccles, 2002; Wigfield et al., 1991, Wigfield et al., 1997) was developed to conceptualize how various motivational and social factors influenced individual expectations for success and the values placed on the various choices individuals perceived to be available. This theory posits that students will make achievement-related choices, such as those related to their performance, effort, and activity choices, based on those activities they value and in which they believe they will be successful. Researchers have previously used the expectancy-value theory to examine motivations toward participation in instrumental music (Eccles, Wigfield, & Blumenfeld, 1993; Hurley, 1992; McPherson & Hendricks, 2010; McPherson & O'Neill, 2010; O'Neill, Sloboda, Boulton, & Ryan, 2001; Wigfield et al., 1997), which will be discussed in Chapter Two.

Researchers in the field of leisure sociology (i.e., leisure studies) have examined constraints and barriers to activity participation that informed the present study. Leisure studies research focuses on understanding how people of all ages choose to spend their leisure time, including research focused on activity participation and nonparticipation. Within this body of literature, studies concerned with the barriers individuals perceive to obstruct or restrict their participation in various activities are particularly relevant. For example, Searle and Jackson (1985) discovered that socioeconomic variables (e.g., income and level of education) influenced individual perceptions of the barriers to activity participation, creating an unequal distribution of barriers in which individuals from low socioeconomic backgrounds were the most affected.

One theory to emerge from leisure studies research regarding barriers to activity participation is the theory of *constraint negotiation*, which states that participation in any activity is the result of successfully negotiating the obstacles to participation (Jackson et al., 1993). Crawford and Godbey (1987) proposed that constraints operate in a context between preference and participation. Not only do constraints affect activity participation, but these barriers can also influence individual preferences for activities, as well. The hierarchical model of leisure constraints (Crawford et al., 1991) positions activity participation as the outcome of the successful negotiation of barriers at three levels: intrapersonal, interpersonal, and structural. Nonparticipation can occur at any constraint level, ordered from most proximal (i.e., interpersonal) to most distal (i.e., structural). Crawford et al. (1991) suggested the experience of constraints in this model may be related to a "hierarchy of social privilege" (p. 317) and that the effect of social

class on participation and nonparticipation may be more influential than previously reported.

The previous examination of a variety factors in predicting participation outcomes in school music suggests that these factors might operate in a hierarchical manner. Music education research has identified differences between students who participate in school music programs and those who do not (i.e., intrapersonal); the influence of families, teachers, and peers (i.e., interpersonal); and various music program elements, such as repertoire and instructional pedagogies (i.e., structural). Researchers in the fields of educational psychology, arts, and leisure sociology have investigated factors related to these same questions in different contexts that informed the present study. While there is no empirical evidence that constraint negotiation plays a significant role in students' decisions not to participate in school music, past research literature suggests this might be the case. A complete review of the related literature regarding the expectancy-value and constraint negotiation theories will be provided in Chapter Two.

Significance

Much of the research regarding student involvement in school music programs consists of quantitative studies designed to examine demographic variables as predictors of participation or nonparticipation in music (Corenblum & Marshall, 1998, Costa-Giomi & Chappell, 2007; Elpus & Abril, 2011; Fitzpatrick, 2012; Kinney, 2008, 2010; Klinedinst, 1991; McCarthy, 1980; Stewart, 1991). The results of these studies have revealed a number of important demographic differences between students who participate in music and those who do not. However, these studies do not explain whether these factors may have played a role in students' decisions regarding school

music enrollment, nor do they reveal the underlying reasons why these students do not participate in school music. Few qualitative and mixed methods studies have specifically examined student participation in music. While Albert's (2007) qualitative study reported factors considered to be important in attracting and maintaining student enrollment in music, participants in this study were exclusively music educators. The themes reported by Albert may not hold true for the *students* in those same programs, highlighting the need for research from the student perspective. Focused on the student perspective, Horne's (2007) mixed methods study focused on the experiences of African American students in choral programs and examined differences between their perceptions and those of White students.

The use of mixed methods research designs is just beginning to emerge in music education (Bazan, 2011; Clementson, 2014; Fitzpatrick, 2011; Gerrity, Hourigan, & Horton, 2013; Horne, 2007; Whitaker, 2011), and its ability to provide greater insight into complex topics makes it ideal for addressing questions in music education. Mixed methods research brings the methodological strengths of both quantitative and qualitative approaches to bear on the phenomenon under investigation. The researcher chose a mixed methods research design for the present study in order to use both numerical and narrative data to generate a more complete understanding of the complexities of student nonparticipation in secondary school music.

The theory of constraint negotiation (Jackson et al., 1993), previously untested in music education, may have the potential to explain students' experiences in school music programs based on its use in leisure sociology research (Hubbard & Mannell, 2001; Raymore, Godbey, Crawford, & VonEye, 1993; Scott, 1991; Walker, Jackson, & Deng,

2007). The hierarchical model of leisure constraints (Crawford et al., 1991) may be an appropriate theoretical lens for the examination of student nonparticipation in school music for three reasons. First, this theory recognizes that a variety of barriers to participation exist, including personal activity preference, social norms and expectations, or other factors inherent in the activity itself. Second, the theory acknowledges that the manner in which individuals perceive these barriers may vary for each person and that individual circumstances may influence the types of barriers encountered. Finally, this model accounts for the interactions of individuals with factors both within and outside of their control.

As schools become more culturally and economically diverse, it is necessary to study those populations currently underserved by school music programs to determine what factors might contribute to these students' nonparticipation. The present study seeks to determine which factors influenced students' decisions not to participate in school music, what specific barriers prevented them from participating, and how school music programs might be reconceived to address needs that presently may not be met. The findings of this research might serve to inform the development and implementation of school music programs as well as to facilitate the recruitment to, and retention of, students in secondary school music programs. When teachers and administrators understand the experiences of their students and potential students more fully, they can adjust classroom procedures and existing programs or create new music courses to better meet the needs of a diverse group of students. Despite the fact that teachers may ask students about their reasons for not joining or for leaving school music programs, students may not be comfortable sharing the real reasons they do not participate. The

information collected by the researcher from nonparticipating students provided insight into their experiences that teachers could use to inform their practice and programs.

Limitations

The present study was conducted in one Midwestern high school purposely selected for the diversity of its student population. As a result, participation in the study was restricted to those students enrolled in that school during the period in which data collection occurred (between November 2014 and April 2015). The use of one school and one sample of study participants limited the degree to which the results might be generalizable to other settings. However, detailed descriptions of the setting and the study participants, provided in Chapters Three and Five, are intended to provide the reader with adequate information to judge the extent to which these findings might be transferable to other school settings.

This study provides a first step toward building a deeper understanding of the reasons that students choose not to participate in school music. If school music programs are to change in order to better meet the needs of those students currently underserved, it is essential to gain insight into these students, their experiences, and their perceptions. The goal of this research is to understand the experiences of the students in one school who do not participate in school music, including the voices of students from populations currently underrepresented, and to discover how school music programs might engage a larger and more diverse student population.

Keywords and Definitions

Several terms recur throughout the document for which the intended meaning is specific to the present study. These terms are listed here, along with their definitions, to explicate their meaning.

Barrier(s): Obstacle(s) perceived to prevent participation in a given activity; here, school music.

Constraint(s): Obstacle(s) of varying intensity perceived to momentarily restrict or permanently alter participation in a given activity; here, school music.

Constraint negotiation: A theory stating that participation in any activity is the result of the process of successfully negotiating constraints to participation (Jackson, Crawford, & Godbey, 1993).

Diverse/diversity: The term is used in reference to cultural, racial, and socioeconomic differences between individuals and groups of people.

Hierarchical theory of constraint negotiation: A theoretical framework proposed by Crawford, Jackson, and Godbey (1991) in which constraints to activity participation operate in a hierarchical manner on three levels ordered from most proximal to most distal: intrapersonal, interpersonal, and structural.

Nonparticipation/nonparticipant: Refers to the choice not to engage in school music programs and to those students who do not engage in school music programs. In reference to students at the research site, these terms represent the choice of students not to enroll in any of the music courses offered at the school.

Participation/participant: Refers to the act of engaging in school music programs and to those students who engage in school music programs. In reference to students at the

research site, these terms represent the choice of students to enroll in one or more music courses offered at the school.

Overview of the Study

Nonparticipation in school music programs is an intriguing phenomenon about which little is truly known. The large percentage of students who choose not to participate in music at the secondary level suggests that school music programs may not be meeting the needs of the school populations they are intended to serve. As suggested by previous research, there are likely many factors that contribute to students' choices regarding engagement in music at school. The present study explored the factors that contributed to students' decisions not to participate, as well as the barriers that students perceived to their participation, with a focus on students from populations currently underserved by secondary school music programs.

This research is organized into seven chapters that provide an introduction, the background for this study, the methods used in this research, the data analysis and results, and a discussion of the findings and their implications for music education. Chapter Two presents an in-depth review of the literature in music education related to participation and nonparticipation in school music; the theory of constraint negotiation and the hierarchical model of leisure constraints; the expectancy value theory and the model of achievement-related choices; and related topics in the fields of educational psychology, arts, and leisure studies research. After establishing the foundations for this project presented in previous research, Chapter Three provides an overview of mixed methods research; a detailed description of the design and the methods used in this study; the paradigmatic approach of the researcher; and the quantitative, qualitative, and mixed

methods analytical processes for the data collected in this study. Chapter Four presents the quantitative analysis and results and discusses how validity and reliability were established for this survey instrument. Chapter Five presents the qualitative analysis and results and the verification measures taken to trustworthiness. The mixed methods analysis and the discussion of these results related to the research questions for the basis of Chapter Six. Chapter Seven provides a summary of the results, recommendations for future research, and implications for music education. Finally, the appendices contain materials related to this research referenced throughout the document, including forms related to the Institutional Review process, the survey and interview protocols developed for this study, and the full pilot test results.

CHAPTER TWO: REVIEW OF LITERATURE

The purpose of this review of literature is to present extant research regarding student nonparticipation in K-12 school music programs, the expectancy-value and constraint negotiation theories, and the literature from related fields that informed the present study. The researcher focused on investigations related to issues of participation and nonparticipation in music, including enrollment, retention, and attrition. The summary that follows considers the results of these studies and their relevance to the present study, organized into three major sections. The first section is a review of literature in music education, beginning with empirical literature regarding characteristics and factors related to participation and nonparticipation, concluding with theoretical literature describing typologies of students in these groups. The second section is a discussion of the development of expectancy-value and constraint negotiation theories used in the present study to explore elective course enrollment in music. The third section presents studies from other fields of inquiry that informed the creation of scales and items for the survey designed for this investigation.

Given the corpus of literature regarding factors that facilitate or inhibit musical participation, the present researcher focused on those studies that explicitly stated a connection to participation or nonparticipation, or compared students in these groups. In addition, because K-12 musical experiences were central to the present research, this review is limited to research that centered on participants in these age groups. Regarding language, many of the studies that explored differences between males and females reported this variable as "gender," but actually reported the "sex" of study participants, as

either male or female. West and Zimmerman (1987) distinguished between sex and gender: *sex* is determined by biological criteria used to classify individuals as male or female; *gender* is a "socially organized achievement" (p. 129) in which an individual's conduct and interactions are interpreted within social norms regarding the "attitudes and activities appropriate for one's sex category" (p. 127). The present researcher chose to use the term "sex" as a more accurate description of the characteristic measured.

Participation and Nonparticipation in School Music

Researchers interested in participation and nonparticipation in school music have approached their work from a number of perspectives, including enrollment, retention, and attrition. The majority of these studies centered on retention in school music, with fewer concentrated on attrition. In this research, researchers explored a wide array of demographic characteristics and musical and nonmusical variables using a variety of statistical procedures. Within this section, studies are presented in seven areas, beginning with those examining school music participation nationwide. The second area summarizes studies exploring the reasons that students, teachers, and parents give for participation, discontinuation, and nonparticipation in school music programs. The third area includes literature in which researchers built models for predicting participation and attrition. The fourth area considers examination of musical variables related to participation and nonparticipation. The fifth and sixth areas consider other factors and contexts that facilitate or inhibit participation in school music programs. The final area consists of theoretical research in music participation and nonparticipation.

National Demographic Profiles

It is useful to begin with an overview of the student populations currently served by school music programs and a consideration of enrollment trends in music education on the national level. Studies using large governmental data sets have described the demographic characteristics of music participants and nonparticipants among the American secondary school student population. Researchers in these studies used data collected through a series of longitudinal studies conducted by the National Center for Education Statistics (NCES). Together, these governmental studies describe the educational experiences of students and identify educational trends over five decades, from the 1970s to the 2010s (Ingels et al., 2007).

Hoffer (1980) summarized the music course data from the 1976 NCES report of public secondary schools. Although critical of the accuracy of the data reported by states (for example, Kansas reported just 77 students in band statewide), Hoffer conceded the report provided a valuable overview of music participation. Nationwide, 32.9% of students enrolled in music courses, a decrease of 9% since 1961. The majority of students participating in high school music (94.27%) participated in performance courses, with just 5.73% taking music appreciation or theory. The report suggested a decline in music participation between middle and high school, as 51-58% of middle school students and 20% of high school students enrolled in music.

Using data from the High School and Beyond survey, Stewart (1991) examined opportunity, access, and participation in school music using base year and first year follow-up data collected during 1980 and 1982. Among the senior class of 1982, 36.5% of students enrolled in music courses, an increase from the rate reported by Hoffer

(1980). The majority of schools offered music courses (92.1%), including band (80.1%), chorus (77.9%), orchestra (20.4%), music theory or composition (32.8%), and music history or appreciation (29.9%).

Stewart (1991) conducted a logistic regression to discover how each of the independent variables influenced the probability of enrollment in music courses when other variables were included in the model. Significant predictors in the model included sex, socioeconomic status, academic track, lessons before high school, extracurricular activities, school size, and school region. The model accurately predicted 62.9% of students in any music class, with predictions for specific music classes as follows: 58.3% for strings, 60.9% for band, 64.8% for music theory, 65% for chorus, and 69% for music history and appreciation. The regression results revealed that students who were female, from higher socioeconomic levels, took music lessons before entering high school, located on the academic (i.e., college preparatory) track, or participated in two or more extra-curricular activities were more likely to enroll in music courses. However, students who participated in sports were less likely to enroll in music.

In an effort to update Stewart's (1991) study, Elpus and Abril (2011) used data from the NCES Education Longitudinal Study of 2002. These researchers used data from the first year follow-up, collected from approximately 14,900 high school seniors enrolled in public and private high schools during 2004. In the survey, students self-reported their participation in a school sponsored "band, choir, and/or orchestra" (p. 131). Elpus and Abril (2011) discovered that 21% of high school seniors nationwide participated in school ensemble music, a decrease of nearly 10% in the two decades since Stewart (1991). Examining music participants by school demographics, 50% of students

in suburban schools, 30% in urban schools, and 20% in rural schools participated in music.

The majority of music participants were female (61%) and spoke English as their native language (90.4%). Music participants identified their race/ethnicity as White (65.7%), Black (15.2%), Hispanic (10.2%), Multiracial (4.3%), Asian (3.8%), American Indian/Alaskan Native (0.7%), and Native Hawaiian/Pacific Islander (0.2%). Elpus and Abril (2011) reported socioeconomic status by quartile, with 32.2% of music participants in the highest quartile followed by 27.8% in the third quartile, 23% in the second quartile, and 17% in the lowest quartile. The majority of music participants came from dual parent/guardian homes (79.4%), while 20.6% came from single-parent/guardian homes.

Elpus and Abril (2011) determined eight variables were significantly related to music ensemble participation: sex, race/ethnicity, socioeconomic status, native language, parental education, math achievement, reading achievement, and grade point average. An examination of the adjusted standardized residuals revealed imbalances in ensemble participation related to sex, race/ethnicity, socioeconomic status, and educational achievement. The demographic groups found to be overrepresented were White, females, native English speakers, those located in the highest quartile of socioeconomic status, or children of parents who received an advanced degree (e.g., masters or doctorate). Imbalances also existed in academic achievement; student groups significantly overrepresented were those scoring in the highest quartile in mathematics and reading

standardized test scores and those with unweighted grade point averages between 3.01 and 4.0.[1]

At the other end of the spectrum, the results revealed a nearly equal number of student groups underserved by school music (Elpus & Abril, 2011). Student groups significantly underrepresented in music ensembles were Hispanic, males, native Spanish speakers, those located in the lowest socioeconomic quartile, or children of parents who received a high school diploma or less. In respect to academic achievement, significantly underrepresented groups in music included those scoring in the lowest quartile of mathematics standardized test scores, those scoring in the two lowest quartiles in reading standardized tests scores, and those with grade point averages between 0 and 2.0.

Elpus and Abril's (2011) study revealed that music participation has declined in the last two decades and suggested that music education in secondary schools was not serving all students. Music students continued to be more privileged socially and economically than nonparticipants. Elpus and Abril suggested the link between academic achievement and music participation might indicate that academically motivated students were more likely to study music and that this association may be related to their higher socioeconomic level. The authors proposed that the underrepresentation of native Spanish-speaking students in music might be due to their involvement in programs for English language learners that require additional, often remedial, coursework. The

[1] Grade point averages were transcript-reported in the governmental data set. The categories presented here were those reported by Elpus and Abril (2011), in which no information was provided regarding the procedures for categorizing grade point averages that existed between categories (e.g., between 3.0 and 3.01).

differences between school music participants and nonparticipants are clear, but the reasons for these differences are not.

Reasons for Participation and Nonparticipation in School Music

In examining the reasons that students decide to participate, discontinue, or not participate in school music, an obvious source of information is the students themselves. In addition to asking students about their motivations (Rawlins, 1979; Wolfle, 1969), researchers also explored the perspectives of teachers (Boyle, DeCarbo, & Jordan, 1995; Gamin, 2005; Ng & Hartwig, 2011; Martignetti, 1965), parents (Brown cited in Boyle, et al., 1995; Martignetti, 1965), and peers (Gouzouasis, Henrey, & Bellieveau, 2008). Many of these studies were descriptive in nature, but provided important insights regarding student perceptions of the school music experience. The present researcher summarized the reasons reported as being the most important in these studies.

Students likely have many reasons for beginning and continuing in elective school music. Wolfle (1969) compared the reasons given by students who continued and discontinued instrumental music for joining the band program. Students in both groups initiated instruction because they enjoyed playing, liked music, and wanted to play a musical instrument. Students who continued also wanted to become musicians and believed they had talent, while those who discontinued cited their parents' influence and a desire to see what it was like. Middle school instrumentalists also cited their enjoyment of music and playing an instrument as reasons for wanting to continue band participation in high school (Gouzouasis et al., 2008). These same students also believed that their peers who discontinued did so to avoid music, rather than to pursue other activities.

Despite this observation from continuing musicians, one of the top reasons for not participating or discontinuing musical participation was involvement in other activities (Brown, as cited in Boyle et al., 1995; Horne, 2007; Martignetti, 1965; Wolfle, 1969). A lack or loss of interest (Horne, 2007; Martignetti, 1965; Rawlins, 1979; Wolfle, 1969), and lack of time (Brown cited in Boyle et al., 1995; Horne, 2007; Wolfle, 1969) were among the reasons students most frequently reported. Students also reported they believed they did not have musical ability (Rawlins, 1979; Wolfle, 1969), did not enjoy singing or disliked the teacher (Horne, 2007), or felt peer or parental pressure to discontinue (Rawlins, 1979). Martignetti (1965) reported the majority of elementary students who left the band program (69%) discontinued playing because the instrument was hard to learn when they expected it to be fun, suggesting a mismatch between their expectations and their actual experiences in learning an instrument.

Teachers perceived some of the same reasons for discontinuation reported by students, including involvement in other activities (Boyle, et al., 1995; Brown cited in Boyle et al., 1995), loss of interest (Ng & Hartwig, 2011; Boyle et al., 1995), peer influence (Gamin, 2005; Ng & Hartwig, 2011), and lack of parental support (Boyle et al., 1995; Martignetti, 1965). However, many of the teachers reported reasons not listed by students, including lack of commitment or perseverance (Boyle et al., 1995; Martignetti, 1965), practice requirements (Boyle et al., 1995), difficulty of the instrument (Gamin, 2005), and lack of ability (Ng & Hartwig, 2011; Martignetti, 1965). Gamin (2005) reported that urban teachers ranked schedule conflicts higher than rural teachers as a reason for discontinuing school music.

Gouzouasis et al. (2008) were surprised that the factors they thought might be important in retention, such as the influence of the teacher or the availability of other courses in high school, did not emerge during the student focus groups in their study. They wrote, "we thought we knew the answers…we realise that our assumptions have little in common with theirs" (p. 86). This finding confirmed Jorgenson's (1974) results, which indicated significant differences between students, music teachers, and principals regarding the factors they believed to motivate student participation in band. These studies suggested that the perceptions of others might not align with the actual reasons that underlie students' decisions regarding music participation. While the groups in the studies summarized above had some areas of agreement, the differences between them supports the need for research focused on the voices of students who decide not to pursue school music to directly address the matter of nonparticipation.

Statistical Models

Several researchers have built statistical models to determine which variables might predict enrollment (Kinney, 2010; Stewart, 1991), retention (Klinedinst, 1991; Kinney, 2010; Morehouse, 1987; Siebenaler, 2006), intentions to continue participation (Corenblum & Marshall, 1998), and attrition (Hallam, 1998; McCarthy, 1980). These researchers considered demographic characteristics and musical and non-musical variables as potential predictors using three different statistical techniques. Discriminant function analysis and logistic regression are procedures that predict group membership based on a combination of continuous or categorical variables. Structural equation modeling allows descriptions of concurrent relationships between variables and the paths through which they influence a particular outcome. Because the predictive power and

significance of each predictor in these models is dependent on the presence of the other predictors, the models themselves, not individual variables, are presented here.

Using a stepwise discriminant function analysis, Klinesdinst (1991) considered 11 variables to determine their ability to predict retention, performance achievement, and teacher ratings of student achievement among fifth grade instrumental students. The variables examined were musical aptitude, scholastic ability, math achievement, reading achievement, general music teacher rating of student, attitude toward music, self-concept of musical ability, musical background, motivation to achieve in music, socioeconomic status, and instrument adaptation assessment. The results indicated that socioeconomic status, self-concept of musical ability, reading achievement, scholastic ability, and math achievement were all significant predictors of retention in band. The three academic factors (i.e., scholastic ability, reading achievement, and math achievement) were all highly intercorrelated. To determine whether these five factors could accurately predict retention and attrition for the participants, Klinedinst (1991) conducted a classification discriminant analysis. Of the original group of students, 76% remained in instrumental music at the end of the study, while 24% had discontinued their tuition. The overall classification accuracy of the model was 78%, predicting retention with 97% accuracy and attrition with 17% accuracy, suggesting that it might be easier to predict retention than attrition in music programs.

Morehouse (1987) used a stepwise discriminant function analysis to predict retention and attrition among beginning string students using attitudinal factors. This procedure resulted in ordering the predictors in terms of their discriminant ability, or predictive strength. The 15 significant predictors, in descending order, were attitude

toward strings as a class, attitude toward repertoire, expected overall school grade, string teacher attitude inventory score, ownership of instrument, attitude toward string classmates, perceived teacher support, attitude toward selected instrument, age, prior string instrument experience, attitude toward concert performance, negative string class experience, sex, perceived parental support, and instrument currently played. In this model, girls, older beginners, and violists or violinists were more likely to continue playing their instruments. Morehouse reported that teachers with a strict, authoritarian teaching style had low rates of attrition in beginning string students. The overall classification accuracy of the model was 82.9%, predicting retention more accurately (91.7%) than attrition (64.5%).

Hallam (1998) also found significant differences in attitude when comparing string students who continued to play instruments with those who discontinued musical participation, which constituted 23% of the initial study participants. Significant differences between groups included intention to practice, attitude toward practice, and the combined attitude of the student and influence of the teacher. Significant differences also existed between groups regarding musical aptitude, verbal ability, teacher ratings of musical ability, and teacher ratings of ability to understand instructions. The results of a stepwise discriminant analysis indicated that the teacher rating of the student's ability to understand instructions and the student's intention to practice were the only significant predictors of attrition. Hallam concluded that student motivation was the most important factor in attrition, which she tied to achievement, concluding that poor performance "de-motivated" (p. 129) students and led to a loss of interest.

Siebenaler (2006) discovered eight factors that significantly predicted high school choir retention. Three of these factors related to common elementary school music experiences: playing instruments, composing and improvising, and singing. The other significant predictors of continued choir participation were friends participating in music, enjoyment of performance, enjoyment of performing for others, being called a good musician, and purchasing records. The logistic regression model had an overall prediction accuracy rate of 88.5%, predicating participation (95%) more accurately than nonparticipation (78%).

In his study of urban middle school band students, Kinney (2010) argued for a more complex view of music participation, considering independently the factors that influenced students' initial decisions to enroll in band and those that affected their decisions to continue participating. Kinney examined academic achievement (reading test score), socioeconomic status (free or reduced lunch status), family structure (number of parents in the home), mobility (moved into the school in the last two years or not), ethnicity, and sex to create separate logistic regression models to predict enrollment for sixth grade students and retention for eighth grade students. Academic achievement and family structure were the only significant predictors of enrollment, while academic achievement, family structure, socioeconomic status, and sex were significant predictors of retention in band. Students who lived with two parents/guardians or scored higher on the reading achievement test were more likely to enroll and persist in band. Females and those not qualifying for free or reduced school lunch were also more likely to continue in band. Kinney (2010) suggested that students' decisions to participate in band might be

affected by their level of involvement, indicating that some factors may become influential only as students continue their participation in band.

While not originally designed to investigate student attrition among elementary band students in an urban school system, McCarthy (1980) stated that the "setting and large *n* provided an opportunity to investigate some issues related to the phenomenon" (p. 66). During research on the effect of instructional method and student demographic characteristics on musical achievement, 23% of students discontinued the elementary instrumental program. McCarthy found significant main effects for reading test score, socioeconomic status, and sex (female). However, the model only explained 8.9% of the total variance in attrition. The reading test score and socioeconomic status variables each accounted for about 4% of the variance, leaving just under 1% attributed to sex. For this reason, McCarthy hesitated to identify any of these variables as significant predictors of band attrition.

Stewart (1991) examined the effects of student and school characteristics on music enrollment using structural equation modeling. This technique accommodated the testing of latent variables, factors observed indirectly through their effect on other variables. Exogenous variables can be direct and/or indirect predictors of the outcome, a relationship mediated by endogenous variables that may also be interrelated with each other. The exogenous variables were student characteristics, and the endogenous variables were school characteristics and non-musical student behaviors.

Stewart (1991) conducted path analysis to examine the causal patterns among these variables and their effect on the number of music courses taken. The full model, with all variables included, explained 16.3% of the variance in the number of music

courses taken. Significant direct effects existed for music lessons before high school; school region, demographics, type, size, and percentage of college-bound students; academic achievement and track; and number of extra-curricular activities. Students who enrolled in more units of music coursework took music lessons before high school, had higher levels of academic achievement or participated in two or more extra-curricular activities other than sports. These students were more likely to attend schools in the North Central or Southern regions that were rural, public, small, or where a third or less of the student population was college-bound. There was a significant, negative effect of number of music courses for students on the vocational track.

None of the indirect effects were significant in the model. Minority status had the largest indirect effects on the model, with minority students taking fewer music courses. Socioeconomic status had a small, negative direct effect on the model. Considered with the larger, positive (though non-significant) direct effect of socioeconomic status, Stewart (1991) concluded that social class did not increase or decrease the amount of music coursework taken. The author suggested that the types of school students attended and their school behaviors influenced the number of music courses in which they enrolled.

Focused on predicting the intentions of high school freshmen to continue in band, Corenblum and Marshall (1998) developed and tested a structural equation model. The exogenous variables were socioeconomic level, teacher evaluation of musical performance, and grades. The endogenous latent variables, or mediating factors, were student attitudes and perceived parent and teacher attitudes toward the band program; extracurricular musical interests; and attributions for performance. Attributions for performance (Asmus, 1990) were those factors students believed to influence their

musical performance. The results of a principal components analysis confirmed two components: *pessimism* (hopelessness in reaction to a poor performance) and *strategy* (crediting effective methods for improving performance). The structural equation model using ten latent factors provided a good fit of the data, although it only accounted for 28% of the variability. All of the standardized path coefficients were significant at $\propto$ = .05 (Figure 1 shows the trimmed model).

Socioeconomic level, teacher evaluations, and the perceived attitudes of "significant others" (p. 138) predicted students' intentions to continue in band (Corenblum & Marshall, 1998). Socioeconomic level indirectly predicted intentions to continue, mediated by parental support, outside musical interests, and school and teacher support. Teacher evaluations of student performance and perceptions of parental support directly and indirectly related to intentions to continue. Teacher evaluations of musical performance indirectly predicted intentions to continue, mediated by parental support and student attributions. The higher the teacher rating, the more likely students were to continue in band. The more successful students were in band, the more likely they were to credit the use of effective strategies for their performance and the less likely they were to attribute their success to chance. Perceived parental support was a mediating factor between socioeconomic level and teacher evaluation of musical performance, as well as between socioeconomic level and intentions to continue in band.

A surprising finding of this study was that the more favorable student attitudes were toward the band program, the less likely students were to continue (Corenblum & Marshall, 1998). In a post-hoc analysis, the authors reported that the correlations between attitude items were positive and significant, but their correlations with intentions

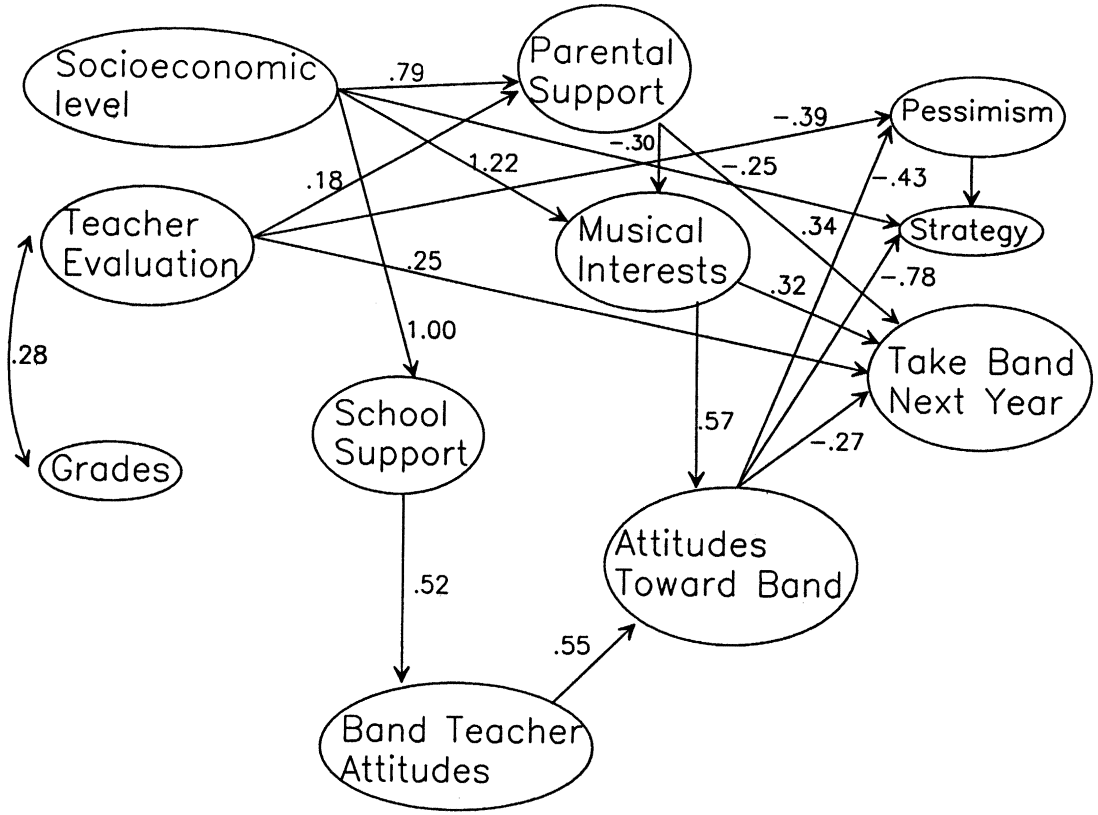


Figure 1. Corenblum and Marshall (1998) trimmed structural equation model relating socioeconomic level, teacher evaluations, grades, perceived school support, perceived attitudes of parents and teachers, outside musical interests, attributions, and student attitudes to intentions to continue in band the next year. Reprinted from *Journal of Research in Music Education*, with permission of SAGE Publications.

were positive and near zero. This result led the authors to suggest that student attitudes might act as a suppressor variable when all predictors were considered simultaneously. Therefore, they determined that there was not a significant relationship between student attitudes and intentions to persist in band.

Corenblum and Marshall (1998) concluded that several factors influenced decisions to continue any course of study. Taken together, the variety of significant predictors discovered in the models discussed here supported that finding and suggested that a number of different factors might also predict the level of participation in school music. The significant predictors in these models fit into five categories: demographic characteristics, academic achievement, musical attitudes and characteristics, social support, and activity involvement. The classification outcomes of these models revealed that certain combinations of factors were better predictors of retention than attrition. This suggests that, despite the wide array of variables examined in these studies, the factors that might best predict attrition have yet to be considered. Further, most of these authors were concerned with predicting retention, not participation, so these models distinguish between students who all enrolled in elective school music programs at one time rather than examining differences between students who choose to participate and those who choose not to participate in school music. The present study addresses this gap in the literature by investigating the perspectives of school music participants and nonparticipants and comparing their perceptions and experiences.

The models of participation and attrition presented in this section suggested that certain factors might facilitate participation in the school music program. However, most of the variables considered were non-musical in nature. Other researchers have

specifically examined musical factors in relation to school music participation, which is the focus of the next section.

Musical Factors

It is not surprising that students who succeed in musical tasks, view themselves as musicians, and possess positive attitudes and motivations toward music are more likely to enroll and to continue their participation in music. The studies in this section include research focused on musical factors as they relate to participation: musical aptitude and ability, musical self-perception, motivation and attitudes, combined internal and external musical factors, and support of others. Many of these studies considered combinations of factors, and this section begins with studies examining musical ability and academic achievement.

Musical aptitude and ability. As expected, students who possessed higher aptitudes for music and reached higher levels of musical achievement were more likely to continue participating in school music. Musical aptitude was a significant predictor of retention for both elementary and secondary students (Mawbey, 1973). Student attrition rates at the end of the first year (47% elementary; 66% secondary) were slightly larger than the proportion of students considered less suited to learning a musical instrument (41% primary; 63% secondary). In comparing student performance on the Musical Aptitude Profile, Young (1971) discovered the greatest difference between students who continued and discontinued band was in tempo and rhythm imagery. He suggested that an early focus on rhythmic skills might factor into decisions regarding continuation for these students, which may help to explain early attrition.

Students who continued their musical participation scored significantly higher on measures of musical achievement than those who discontinued (Frakes, 1984; Young, 1971). These differences in musical achievement manifest in the early years of study, as the majority of students to discontinue instrumental music in Hallam's (1998) study were elementary students at the lowest levels of musical achievement. Engagement in lessons, a contributor to achievement, was a significant positive predictor of continuation in school music (Stewart, 1991). Researchers have also linked the quality of practice and the use of effective practice strategies to musical achievement (Austin & Berg, 2006; Barry & Hallam, 2002: McPherson, 2005; McPherson & Renwick, 2001; Pitts, Davidson, & McPherson, 2000). Students who reached higher levels of musical achievement exhibited structured practice strategies to improve their playing, while students at lower levels of achievement reported haphazard practice. Young (1971) discovered that a combination of musical aptitude, intelligence, and academic test scores resulted in the highest correlations with instrumental musical achievement, although the combination of musical aptitude and academic achievement test scores were nearly as high. Retention also significantly related to reading age (for students in the first three years of school) and verbal reasoning scores (Mawbey, 1973). Frakes (1984) confirmed the positive relationship between musical and academic achievement in examining differences between participants and nonparticipants.

Musical self-perception. Research has revealed that the degrees to which students view themselves as musicians and have confidence in their musical abilities were related to participation in elective school music. Austin (1990) reported that scores on the Self-Esteem Musical Ability scale were a significant predictor of musical

participation both inside and outside of school, but accounted for only 18% and 17% of the variance, respectively. There was also a significant main effect for sex (girls' scores were higher). Campbell (2009) explored musical self-perception through *musical possible selves*, both in the present and future in choral, instrumental, and overall (inside and outside of school) contexts. Students' perceptions of themselves as musicians positively related to participation in all contexts.

Davidson (1999) suggested that experiences with music making and social relationships with others assisted students in building a musical identity. Music was an important part of the lives of students in the study, who listened to and discussed popular music with their friends. The largest influence on the decision to start an instrument was social, as nearly half of students wanted to learn an instrument because of others who played in school band, as few of the students in the sample (15%) had parents who had played an instrument. Students' experiences in school music, particularly those with recorder, influenced their decisions to start an instrument. Davidson concluded that students saw themselves in relation to music within the context of their relationships with others, building their musical identities in relation to their musical peers, music as an activity, and their chosen instrument.

Musical attitudes and motivations. Mizener (1993) discovered the majority of elementary students enjoyed singing (78%), but less than half (47%) were interested in singing in choir, finding no significant relationship between enjoyment of singing and choir enrollment. Positive attitudes toward singing decreased among elementary students from grade 3 to grade 6. Mizener suggested that teachers might be able to improve

students' attitudes toward singing by incorporating more of the music class activities they preferred, such as movement, playing drums, and singing to recorded accompaniments.

Examining differences in attitudes toward music, Frakes (1984) discovered a positive relationship with participation. The subcategories within attitude were feelings toward the teacher, course content, self-perception of musical ability, intrinsic interest in music, peer influence, family influence, and time involvement. Concerning attitudes for music participants, all factors related positively with the exception of peer influence. For students who discontinued music, positive relationships existed between feelings toward the teacher and course content and self-perception of ability and intrinsic interest. For nonparticipants, positive relationships existed between self-perception of musical ability and intrinsic interest in music and family influence regarding attitudes toward music. Frakes suggested that, when students possessed less positive values regarding music, scheduling became an important consideration.

Motivations toward music were attributable to a number of different factors and influenced the level of participation, even in elementary students. In research with elementary students, Yoon (1997) reported sex, age, perceived ability, and parental value predicted the choice to play an instrument but perceptions of ability and parental pressure and musical goals related to the mastery of skills predicted the level of engagement in music. Sandene (1997) reported a decline in motivation for 75% of students in grades 5-8 in just six months. Students who discontinued instrumental music had significantly lower self-esteem, motivation, effort attributions, and intrinsic interest in personal and classroom goals. These students had significantly higher ego goal perceptions, or a feeling of superiority over others, than those who continued.

Differences in the locus of motivation also differentiated students at various levels of participation. Students in Jorgenson's study (1974) rated intrinsic factors, such as enjoyment and interest, as stronger motivators for band participation than extrinsic factors, such as a need for recognition. Pitts, Davidson, and McPherson (2000) reported that students who continued to play instruments were intrinsically motivated upon the onset of instruction, while students who discontinued expressed mostly extrinsic goals. The primary motivation for students who ultimately discontinued was the involvement of their peers, with these students losing interest when they discovered they needed to exert more effort in individual practice. Pitts et al. suggested that students who discontinued started with low expectations of their personal enjoyment and achievement, which their parents reinforced.

Other musical factors. A variety of other factors, including combinations of intrinsic and extrinsic motivators, suggested other connections with musical participation. The importance of band and private lessons, in relation to other activities, positively related to intentions to continue (Stewart, 2005). Students who planned to discontinue reported a desire to participate in other activities, suggesting a hierarchy of importance. Although weak, there was a positive relationship between intentions to continue and enjoyment of class participation and performance. The majority of students (81%) reported their plans to continue band in high school related to maintaining friendships, having fun, and taking trips, suggesting that elements of the social environment were important.

Social climate emerged as an important aspect of participation in band, choir, and orchestra classrooms (Adderley et al., 2003). Students expressed that the ensemble

classroom was a place for socialization and that the relationships they made there extended to other activities outside of school. Music students articulated various ways their musical experiences were meaningful and valuable, such as skill development or the opportunity to experience a variety of music. For many students, ensemble involvement was an opportunity to join others with similar interests. Warnock (2009) examined how this desire for like-minded peer groups, termed *attraction theory*, might predict the participation of fifth grade students in middle school band and choir. The significant predictors of participation and nonparticipation were sex (girls as participants, boys as nonparticipants), parental support, and future ambitions in music. A cross-validation of cases resulted in a 57.7% overall classification rate – 66.7% accuracy for band and 72.4% for nonparticipants. Choral participation could not be estimated for the sample because no classification function coefficients reached the threshold of .50. A negative relationship between future musical ambitions and intentions to continue led Warnock to suggest that elementary students did not have long-term goals for their musical involvement.

While not a musical factor, Cutietta and McAllister (1997) examined the personalities of secondary students who continued their musical study. Using the Junior Eysenck Personality Questionnaire, the authors observed changes over time in two traits, tough-mindedness and lying. Tough-mindedness referred to individuals who lacked feelings, and were isolated and sensation-seeking. Lying referred to individuals who tended to exaggerate answers on tests out of a concern for how others might view them. High school instrumentalists were more homogenous on both of these traits than middle school students. The most diverse group of personalities existed among woodwind

instruments, becoming more similar as grade level increased, as did percussionists on the tough-mindedness trait. The authors suggested increasing homogeneity suggested that "nonmainstream students" (p. 291) were more inclined to discontinue their musical study.

The literature in this section illustrates how various musical factors contributed to participation in school music programs. These studies suggest that musicians committed to school music were those with strong musical ability (Mawbey, 1973; Young, 1971); advanced musical achievement (Frakes, 1984; Hallam, 1998; Young, 1971); positive musical self-image (Austin, 1990; Campbell, 2009; Davidson, 1999), attitudes (Frakes, 1984; Mizener, 1993), and motivations toward school music (Jorgenson, 1974; Pitts, Davidson, & McPherson, 2000; Yoon, 1997); and long-term musical goals (Warnock, 2009). The social climate (Adderley et al., 2003) of the music classroom was an important factor for school music participants who were attracted to experiences with individuals who shared their same interests (Warnock, 2009). The gradual homogenizing of personalities suggested that those who continue in music are more alike than different, which might also explain why those students who do not feel "at home" in school music and choose to leave (Cutietta & McAllister, 1997). These studies suggest that students who do not share these characteristics, or do not develop them, choose not to join, or to leave, school music. These studies focused on outcomes fixed at a particular point in time, but did not consider how the experiences of students who did not participate differed from those who did, nor how the experiences of students who discontinued factored into their decisions to do so. The next section considers research in the various social contexts to explore the interactions that shape interest and achievement in music.

Contexts That Facilitate Participation

Social interactions in a variety of settings with parents, teachers, peers, and others play a role in either supporting and advancing musical achievement and interest or undermining and inhibiting it. Hedden (2007) reported that elementary choir festival participants expressed their enjoyment of singing and the encouragement of parents and teachers among their reasons for participating in the festival. Nonparticipants indicated lack of encouragement from parents and teachers, dislike of singing, scheduling conflicts, and friends' nonparticipation in the festival as reasons for nonparticipation.

Students who played musical instruments perceived significantly higher levels of support from parents, teachers, and peers than students who had discontinued playing or never started an instrument (Ryan, Boulton, O'Neill, & Sloboda, 2000). Perceived support from all three groups were predictors of informal (outside of school) instrumental musical participation, while the only predictor of formal (in school) instrumental participation was an interaction of the sex of the student and the support of the teacher. The authors suggested that students who perceived higher levels of parental support might also perceive higher levels of value for engaging in musical activity.

Parental support. McPherson (2009) proposed a framework for parent-child interactions in which parents' goals for their children influenced their parenting styles and practices as they interacted with their children to shape their musical competence, identity, and "the continuing desire to participate, exert effort, overcome obstacles, and succeed" (p. 95) in music. McPherson suggested that high levels of parental involvement and support (adjusted to meet the changing needs of the child) throughout the child's learning process, contributed to the development of musical skills that built toward a

belief in competence. O'Neill (2005) reported that parental support was the most important social support for students who continued musical participation. Other researchers have tested the influence of parents on their children in music.

Simpkins, Fredericks, and Eccles (2012) tested a framework similar to McPherson's (2009) with mothers regarding instrumental music, sports, reading, and math. Mothers' beliefs about the importance of the activity, their children's ability, and their efficacy when their children were in grades 1, 2, and 4 positively predicted their parenting behaviors in music, sports, and math one year later. During that year, mothers' parenting behaviors positively predicted children's self-perceptions of ability in music and sports, and their value in music, sports, and reading. Children's perceptions of ability and value in these domains were significant predictors of the time engaged in music, sports, and reading after school four years later and the number of math courses in which they enrolled during high school. The indirect effects of mothers' behaviors and children's beliefs were significant for self-perceptions of ability and value in music and sports and for math self-perception. These results led the authors to suggest that mothers might be more influential in shaping their children's motivations and behaviors for sports and music than for reading and math.

Parental involvement in lessons and practice was an important facilitator in the development of children's instrumental musical achievement, particularly in the early stages of achievement (Davidson et al., 1996; Davidson, Sloboda, & Howe, 1995/1996). Students who discontinued musical study had the lowest mean musical achievement scores and the least parental involvement in both lessons and practice. Davidson et al. (1995/1996) reported that parents of highly successful musicians provided significantly

more extrinsic motivation in the early stages of learning, which decreased as their children's intrinsic motivations increased. The opposite was true for parents of students who discontinued music lessons, providing little extrinsic motivation in the beginning and increasing during the teenage years when the child's intrinsic interest had nearly disappeared.

Peer support. Peer group relationships can either facilitate or inhibit music participation. Patrick et al. (1999) investigated the role of peers in continued involvement in sports and arts activities. Arts participants believed their involvement provided an opportunity to improve their social skills and build confidence, resulting in deep friendships. Involvement in activities, such as music, expanded students' social networks to include others from different grade levels, perceived by younger students to be advantageous. When social relationships enhanced the enjoyment of an activity, adolescents were more likely to continue, but when they believed that their participation had a negative effect on their social life or friendships, this belief undermined their commitment and motivation. As a result, some students discontinued their participation to find balance, while others maintained their involvement in an elite group to develop their skill and joined a second group to participate with their friends.

Negative perceptions of musical participation suppressed a desire to participate. Patrick et al. (1999) reported that three females in the arts, one each from instrumental music, choir, and drama, shared how their talent and passion for their activity resulted in their peers' perceptions of them as "strange and different" (p. 752). The violinist's peers in the school orchestra called her an "orch dork" (p. 752), but she found a supportive peer group in her youth orchestra outside of school. Adderley et al. (2003) described how

music students believed non-members viewed them both positively (e.g., "intelligent") and negatively (e.g., "band dorks, "choir geeks," p. 197). Middle school band students also described themselves in both positive and negative terms in Gouzouasis et al. (2008), as "smart, successful" and "geeks" (p. 86). These perspectives suggested that music students were cognizant of the social advantages and disadvantages of their musical participation.

Teacher characteristics and support. In addition to investigating perceptions of teacher support, researchers have considered the influence of the teacher, including teacher characteristics, teaching styles, instructional methods, and program structure on school music participation. O'Neill (2005) reported that teacher support was not as important as that of parents, but it helped when teachers communicated a belief in the child's musical abilities and selected music students enjoyed. Davidson et al. (1998) examined the role of teacher characteristics in developing young musicians, ages 8-18 and identified two components of teacher characteristics: *personal* and *professional*. Personal characteristics of teachers included friendliness, relaxed, and chatty, while professional characteristics included encouragement, pushiness, good/bad teacher, and good/bad player. Highly successful musicians reported significantly higher personal factor scores for their first teacher and professional factor scores for their last teacher than former musicians. The authors suggested that the personal characteristics of the teacher were more important in the early stages of musical development, while the teacher's professional and performance skills played a larger role in later stages.

Researchers have examined the relationship between teaching style and instructional methods and the level of participation in school music. Although Groeling

(1975) reported no significant differences in achievement between groups of fourth grade beginning band students using a skill-based class lesson and a discovery learning approach, he noted several behavioral differences. The discovery method included the use of improvisation and composition, as well as an exploration of all the instruments before students chose the one they would play. In the skills-based group, students lost interest in the first 12 weeks, which led to a decrease in practice motivation, and 30% of the students discontinued their involvement. None of the 10 students in the discovery learning group discontinued. The teacher reported that the pacing of introducing new instruments and the periods of individual exploration resulted in sustained interest and motivation. Brakel (1997) confirmed this finding in high school band, where his report on attrition suggested that teaching styles related to higher levels of student autonomy and lower levels of teacher control related positively to retention.

The structure of instrumental music instruction, specifically the grade level at which students start and the frequency of class meetings, was significantly related to retention (Hartley, 1996; Hartley & Porter, 2009). Hartley found that retention was higher among beginning band students after the first year of instruction when they started in grade 5 rather than grade 6, even though grade 6 beginners had more class meetings per week. There was no difference in retention by grade level of initiation at the beginning of grade 7. For beginning string students, Hartley and Porter reported higher retention at the end of the first year of instruction and the beginning of grade 7 when students started in grade 6 than when they started in grade 4 or 5. Grade 6 students averaged one more class meeting per week. These findings suggest that the balance of timing and frequency might both influence achievement, depending on the instrument.

According to Gamin's (2005) work with band and string students, the scheduling of lessons in the school day was also a factor in attrition. Gamin reported that band programs in which students were "pulled out" of the regular classroom for lessons had significantly higher attrition rates than those that scheduled lesson times into the regular school day.

Costa-Giomi (2004) focused on lesson behaviors among fourth grade piano students receiving free lessons. Students who discontinued lessons after the first year missed significantly more lessons, practiced significantly less, and prepared assignments to a significantly lesser degree. Teacher evaluations of student performance revealed significantly lower achievement in the first six weeks for those students who discontinued instruction. Despite the fact that the lessons were free, more students from low-income families discontinued their tuition.

These studies suggest that parents' beliefs and parenting behaviors influence the development of values and competence in children (McPherson, 2009; Simpkins, Fredericks, & Eccles, 2012). In addition, the level of parental support, particularly regarding lessons and practice (Davidson et al., 1995/1996; Davidson et al., 1996), had an impact on children's level of participation. Positive, supportive peers contributed to the continuation of activity, but when the activity interfered with these relationships, or they became negative, students adjusted their involvement or sought new peer groups (Patrick et al., 1999). Teachers also played an important role in supporting the interest and development of music students in their interactions (Davidson et al., 1998) and the instructional methods they chose (Brakel, 1997; Groeling, 1975). These studies primarily assist in understanding the differences between students who continue and those who

discontinue school music participation. Although this research has not focused exclusively on school music nonparticipants, these results suggest factors that might underlie their decisions not to participate. Nonparticipants might not have developed values or competence beliefs to a level that piques their musical curiosity or may not have experienced the kinds of support from parents, teachers, or peers that contributes to musical participation. The focus of the present study on nonparticipants seeks to discover how personal values, beliefs, attitudes, and experiences contribute to decisions not to engage in music at school.

Factors That Inhibit Participation

This chapter began by summarizing research that suggested certain student populations were less likely to participate or remain enrolled in school music. Studies focused on these populations have sought to build an understanding of how the experiences of these students might affect their musical participation. This section focuses on school music participation research regarding race/ethnicity, socioeconomic status, and sex.

Race/ethnicity. Research has identified fewer American Indian/Alaskan native, Asian, Native Hawaiin/Pacific Islander, and non-native English speaking students participating in school music, while only Hispanic and native Spanish speakers students have been determined to be significantly underrepresented (Elpus & Abril, 2011). In interpreting differences between groups based on race and ethnicity, Wigfield and Eccles (2002) suggested that consideration be given to the confounding effect of socioeconomic factors. However, they acknowledged that there are reliable differences between groups.

Music teachers' anecdotal observations suggested many secondary music programs lacked racial or ethnic diversity or both. Chenault (1993) confirmed these casual observations when he discovered that minority populations were underrepresented in music ensembles, even in schools where minority students comprised a third of the overall school population. In his examination of school music programs in North Carolina, he reported that Black students were underrepresented in instrumental groups and overrepresented in vocal groups at the middle and high school levels. The opposite was true for White students, who were overrepresented in instrumental performing groups and underrepresented in vocal groups at the same grade levels. He found American Indian/Inuit, Asian/Pacific Islander, and Hispanic students underrepresented across all grade levels.

Horne (2007) investigated issues related to the retention and recruitment of African American secondary students in choral ensembles in one school. Caucasian students reported significantly more private voice lessons, middle school choral participation, and high school choir participation, while African American students indicated significantly higher participation in church choirs and participation in multiple choirs. Horne explored student identifications with solo and group artists based on differences in choral traditions. The role of the lead singer in the call-and-response performance style prevalent in the African American choral tradition differs from the ensemble singing that dominates the Western choral tradition. African American students identified with solo artists more frequently than Caucasian students, who identified more frequently with group artists. Students believed that the lack of African American role models and perceptions of racial inequality might prevent African

American students from joining choir. Horne believed that building relationships with both students and parents was the most effective recruitment strategy and recommended culturally relevant pedagogy and "relevant, accessible, and diverse repertoire" (p. 165) to engage more African American students in high school choirs.

The lack of role models cited by students in Horne (2007) is an emerging area of research in music education, including the examination of the characteristics of teachers relative to the students in their classrooms. Doyle (2012) reported the misalignment between music teachers and students in urban elementary schools, where African American or Hispanic student populations comprised 50% to 80% of the total school population and most students came from low levels of socioeconomic status. Most teachers were White, highly educated women from suburban backgrounds and two-parent homes. Only 35% of music teachers matched the ethnic majority of their students, and only 22.5% matched the childhood socioeconomic status of their students, with all of the matches in the lower middle class category. Nearly half (46.4%) of teachers were separated from their students on childhood socioeconomic status by two or more levels. These differences can make it difficult for music teachers to relate to their students (Doyle, 2012) and to enact culturally responsive teaching practices and experiences in their classrooms (Abril, 2009). Abril detailed the challenges experienced by Nancy, a White, non-Hispanic music educator, as she instituted and led a mariachi ensemble in her school. Nancy expressed the tensions she felt as she attempted to lead an ensemble in which she had no experience, grounded in a culture about which she possessed little knoweldge.

Culturally relevant experiences and positive relationships with students and families were also important in the retention and recruitment of urban middle school band students (Albert, 2006). The inclusion of culturally relevant ensembles (i.e., those that perform music in a style specific to a particular culture) drew student interest and served as introductory band experiences for beginners. Student perceptions of the band program were important in encouraging them to join and the availability of instruments was essential, as 75% of students used instruments owned by the school. Teachers considered their ability to build rapport and maintain positive, supportive relationships with students to be effective retention strategies. Teachers specified that creating a "safe space" (Albert, 2006, p. 63) helped students feel comfortable and recognized that firm classroom management played a role in developing this environment. Overall, the band teachers in this study believed that the qualities and practices required to be successful engaging band students in low socioeconomic schools were the same as those for successful music teaching in any school.

Lorah, Sanders, and Morrison (2014) examined a nationally representative sample of sophomore students to compare music participation estimates between English Language Learners (ELL) and non-ELL students using NCES data. ELL status was a significant, negative predictor of ensemble participation. However, after controlling for academic achievement and socioeconomic status, ELL status was no longer a significant predictor. This result indicated no difference in the likelihood of musical participation between ELL and non-ELL students of the same socioeconomic and academic achievement levels. Lorah et al. suggested that lower participation rates among ELL

students might be more accurately interpreted as an underrepresentation of students from economically disadvantaged families who experience lower academic achievement.

Socioeconomic status. In the models summarized at the beginning of this chapter, socioeconomic status was negatively related to intentions to continue band (Corenblum & Marshall, 1998), participation in music ensembles (Elpus & Abril, 2011), retention in eighth grade band (Kinney, 2010), retention in beginning band (Klinedinst, 1991), and music participation (Stewart, 1991), and it accounted for a minimal amount of the variance in attrition in elementary band (McCarthy, 1980). Researchers have considered how socioeconomic status operates in educational settings relative to issues of achievement, opportunity, and engagement. Taebel and Coker (1980) stated that "the problem with low SES pupils does not seem to be that they fail to learn at about the same rate, but that they start so much further back than others" (p. 261).

Corenblum and Marshall (1998) described socioeconomic level as "a proxy variable that represents, in part, norms, beliefs, and values about schools and education" (p. 136). The authors suggested that these beliefs underscore the relationship between socioeconomic level and retention in band, resulting in an "obvious, yet subtle" (p. 136) association. One example of an obvious relationship was the presence of socially advantaged students in schools that support music and whose programs enjoy the support of teachers and parents. What was subtler, in their view, was how "students' perception of the attitudes of parents, teachers, and the school reflects a larger belief system associated with middle-class cultural beliefs and values" (p. 136), a set of beliefs that may not be valued by all. Students from low socioeconomic backgrounds may not be able to afford to continue in band, but it is also possible that they do not believe that it is

important that they do so, or that they are not supported in their involvement by their parents, teachers, or schools.

The ability of schools to support music education programs is often also a matter of the socioeconomic status of the school. Costa-Giomi and Chappell (2007) investigated 25 schools in the same district to determine whether students had equal access to band programs of similar quality. They discovered that the socioeconomic level and the minority representation of a school's population affected the resources, finances, and parental support in their band programs. Band teachers in both high socioeconomic status and low minority representation schools enjoyed significantly more parental support and involvement, adequate technical resources, and student financial aid compared to teachers in low socioeconomic status or high minority representation schools. The authors concluded that the opportunity to participate in band programs was not equal in all schools due to an uneven distribution of resources based on the socioeconomic level of the students in the school. The authors posited a reframing of the question regarding student access to school music: "The critical question that needs to be asked is not whether students have equal access to music education programs, but whether they have equal access to equally good programs" (p. 16).

Sex. According to the models at the beginning of this chapter, boys were less likely to participate in music ensembles (Elpus & Abril, 2011) and school music (Stewart, 1991) or to persist in eighth grade band (Kinney, 2010), though sex accounted for a negligible amount of the variance in attrition in elementary band (McCarthy, 1980). Other studies presented throughout this chapter concluded that girls had higher musical self-esteem (Austin, 1990), were more likely to participate in band (Warnock, 2009),

choose to play an instrument (Yoon, 1997), and persist in beginning strings (Morehouse, 1987) and all instruments (O'Neill, 2005). Mawbey (1973) reported that twice as many girls started playing instruments as boys, but a higher proportion of boys discontinued at both the primary and secondary levels. Girls had more positive attitudes than boys regarding singing and reported higher levels of support from parents, teachers, and peers than boys (Mizener, 1993). Girls also reported higher beliefs in their abilities and higher values for instrumental music than boys (Eccles et al., 1993; Eccles, O'Neill, & Wigfield, 2005; Wigfield et al., 1997). Gender-role stereotypes played a role in shaping the beliefs and values that contributed to activity choice behaviors (Wigfield & Eccles, 2002). These gender differences in values and beliefs for various activities emerged early in childhood and remain largely unchanged (Wigfield et al., 1997).

The transition between middle school and high school is a crucial period during which many students discontinue their school music participation (Brakel, 1997; Hoffer, 1980; Frakes, 1984). O'Neill (2005) reported a decline in participation in all music activities after the transition to, and throughout the first year of, secondary school for all musical activities except listening to music after school. By the end of the first year of secondary school, only 35% of students who played instruments in elementary school continued. Examining the transition period to secondary school, students who continued music expressed more confidence in their ability, placed more value on playing, and reported more positive experiences in overcoming difficulty on their instruments. Students who discontinued felt they had less choice in instruments, repertoire, and musical activities.

The recruitment and retention of boys in choir has been an area of particular focus in school choral programs. Sweet (2010) explored the perception of eighth grade boys concerning choir participation and discovered that, although they enjoyed singing, they were noncommittal toward continuing choir in high school. The boys reported ignoring their siblings when they teased them about choir, but taunts from peers were troubling. These upsetting comments included joking from other choir members about their singing or range, as well disparaging comments from male peers who were not in choir. Kennedy (2002) considered motivation for choir participation among boys in grades 8 and 9, who joined because of their enjoyment of singing, the influence of the teacher in recruiting, and the involvement of their friends in choir. Results revealed that the range-appropriateness of the repertoire was not a factor in the enjoyment of the experience, although students did confide their struggles with, and strategies for, notes out of their range. More important, the singers wanted to sing repertoire they enjoyed, which included a wide variety of musical styles.

This section of the literature review brought together results from studies that suggested race/ethnicity, socioeconomic status, and gender might inhibit school music participation. These studies reported the challenges of retaining students from diverse populations (Horne, 2007) and the challenges of meeting the needs of students from these populations (Abril, 2009; Doyle, 2012), which often include socioeconomic differences as well (Albert, 2006). These studies suggested that providing instructional materials for those who cannot afford them might not fully address the issues related to socioeconomic disadvantage. Part of the difficulty in confronting these matters lies in a lack of understanding about how socioeconomic status is operationalized in the lives of students

regarding perceptions of school music (Corenblum & Marshall, 1998). While significantly more girls participated in school music than boys (Warnock, 2009; Yoon, 1997) and more boys discontinued school music (Mawbey, 1973), it is especially interesting that most of these differences have been observed in instrumental music, where a large proportion of teachers are male, particularly at the secondary level. Addressing these issues in music education is an ongoing task, and the inclusion of student perspectives in the present study is intended as a first step toward understanding nonparticipation by students in these groups.

Theories of Participation and Nonparticipation

Researchers in music education have posited theories regarding music participation by constructing typologies to describe both music participants and music nonparticipants. Focusing on music participation, Gates (1991) forwarded a global theory to differentiate between types of musical involvement within society focused on motivations for musical participation. Concerned with describing students who choose not to participate in music at school, D. B. Williams (2007, 2012) constructed a typology of attributes to describe music nonparticipants. While each of these theories focused on different outcomes (e.g., participation and nonparticipation), both offered insight into music nonparticipants by describing student motivations toward musical engagement and their relationship with music and school.

Gates (1991) proposed a theory of music participation based on research in leisure sociology. He defined music participants as "those who directly or indirectly produce musical events for an audience" (p. 6), including dancers and event producers. He proposed three classes of people related to music: music participants, music audiences,

and those uninterested or uninvolved in music. Informed by leisure studies research regarding differences in the roles of various participants in the social systems of sports and theater (Shamir & Ruskin, 1984; Stebbins, 1979), Gates constructed a typology of six categories of music participants: professionals, apprentices, amateurs, hobbyists, recreationists, and dabblers.

Gates (1991) further defined these music participant roles by their behavioral motivations for engaging in music and the perceived cost-benefit ratio of participation. For professionals and apprentices, music participation was a means of making a living in which they viewed music as work. These music participants were able to accept costs of participation that outweighed benefits until it was no longer economically sustainable. Amateurs and hobbyists viewed music participation as serious leisure, where the costs of participation might be greater than the benefits for long periods. Hobbyists were willing to endure such periods of imbalance out of an intense desire to improve their skills and expand their knowledge. Recreationalists and dabblers viewed music as play, tolerating high costs and low benefits only as long as they remained interested in music. Recreationalists engaged in music as a form of self-entertainment, while the curiosity that motivated dabblers to participate in music was generally short-lived. These last two categories of music participants may describe students who join, but later discontinue, elective school music programs or who interact with music on their own terms outside of school but do not participate in music at school.

Concerned with students who do not participate in school music, termed "the other 80%," D. B. Williams (2012) developed a characterization of "non-traditional music (NTM)" (p. 131) students, those who do not participate in traditional school music

ensembles. Williams examined empirical studies and anecdotal data to compile a set of attributes to describe NTM students. He proposed eight attributes of non-traditional music students: in grades 6 to 12, did not participate in school music ensembles, had a musical life outside of school, may sing or play an instrument, may not read musical notation, may be academically unmotivated or have a history of disciplinary problems, may be a special needs students, and may desire a career in music recording or the music industry (p. 137). Williams suggested NTM students could be attracted to technology-based music classes (TBMCs) as a means to explore creative music making through the use of technology in constructivist, hand-on learning environments.

Taken together, the work of Gates (1991) and Williams (2012) fosters a greater understanding of school music participants and nonparticipants. Beyond recognizing the various motivations that drive music students, Gates' work may be most useful in helping music educators to understand why students discontinue school music. Gates stated that a combination of personal motivations and preconceived expectations of the balance of costs and benefits may influence the longevity of musical involvement. Viewed in the context of school music, this theory suggests that the expectations placed on musical participation in school might be considered one of the costs of involvement and factor into nonparticipation. What is not explicated in this research is whether a misalignment of these expectations of involvement between students and teachers might also contribute to student nonparticipation. Williams' work, however, provides a starting point for understanding those students who do not participate in music at school, even though they may be musical. This work might also serve as a framework for evaluating existing music programs and the types of musical experiences they provide, as well as raising

questions about the student populations these programs do and do not serve. Williams suggested that expanding school music in nontraditional directions may create opportunities to engage more students in school music. However, more study of the NTM student population is needed to determine whether, and how, these students could be engaged in school music.

Section Summary

The literature summarized in this section suggests that a large number of factors influence the level of student participation in school music programs. What is striking in these studies is that the interactions of these factors seem to be somewhat fixed, categorizing variables and relating them to outcomes in a manner that suggests clean, clear borders between constructs and outcomes. The ability of each of these factors to facilitate, inhibit, or obstruct musical participation suggests that there is a *process* by which students formulate values and beliefs and encounter these factors in their lived experience that contributes to their level of participation in school music. While it is beyond the scope of the present study to consider all of these variables, the selection of theoretical frameworks that explain choice behaviors, or the *process* of selecting from available options, assisted in narrowing the scope for this investigation. The next section presents the theoretical lenses selected for the present study due to their consideration of choice behaviors as a process: expectancy-value and constraint negotiation theories.

Theoretical Frameworks

Expectancy-Value Motivational Theory

Drawing from a number of motivational theories, Eccles et al. (1983) initially sought to explain gender differences in academic achievement, built upon the foundation

of expectancy-value theory established by Atkinson (1964). Eccles and her colleagues developed a theoretical model to examine the formation of *achievement-related choices*, such as performance, effort, and activity choice. Their theory conceptualized how various "motivational and social factors" (Eccles, 2005, p. 105) influenced individual expectations for success and the values placed on the various choices available.

Eccles et al.'s model (1983) represented the relationships between personal beliefs and cultural expectations, personal experiences, aptitude, and short- and long-term goals (Figure 2). According to this model, individual perceptions, not reality, shaped the expectancies and values that motivated behavior. Looking at the model from left to right, the reality of cultural norms and previous events is mediated by the influence of others (e.g., parents or peers) and individual perceptions, formulating personal goals and perceptions associated with a particular task (represented in the middle). These factors determined the expectancies and values for a specific task, which served as the basis for achievement behaviors.

Eccles (2005) specified four features of the model she believed to be essential in understanding the differences in achievement-related behaviors between individuals and groups. First, achievement-related behaviors arise out of both conscious and unconscious choices that develop into measurable differences in achievement patterns between groups and individuals. Over time, these choices develop into measurable differences in achievement-related patterns. Second, individuals do not "actively or consciously consider the full range of objectively available options" (p. 107). Options are limited by what each individual considers available to them and whether they consider participation to be socially acceptable based on gender or other social roles. Therefore,

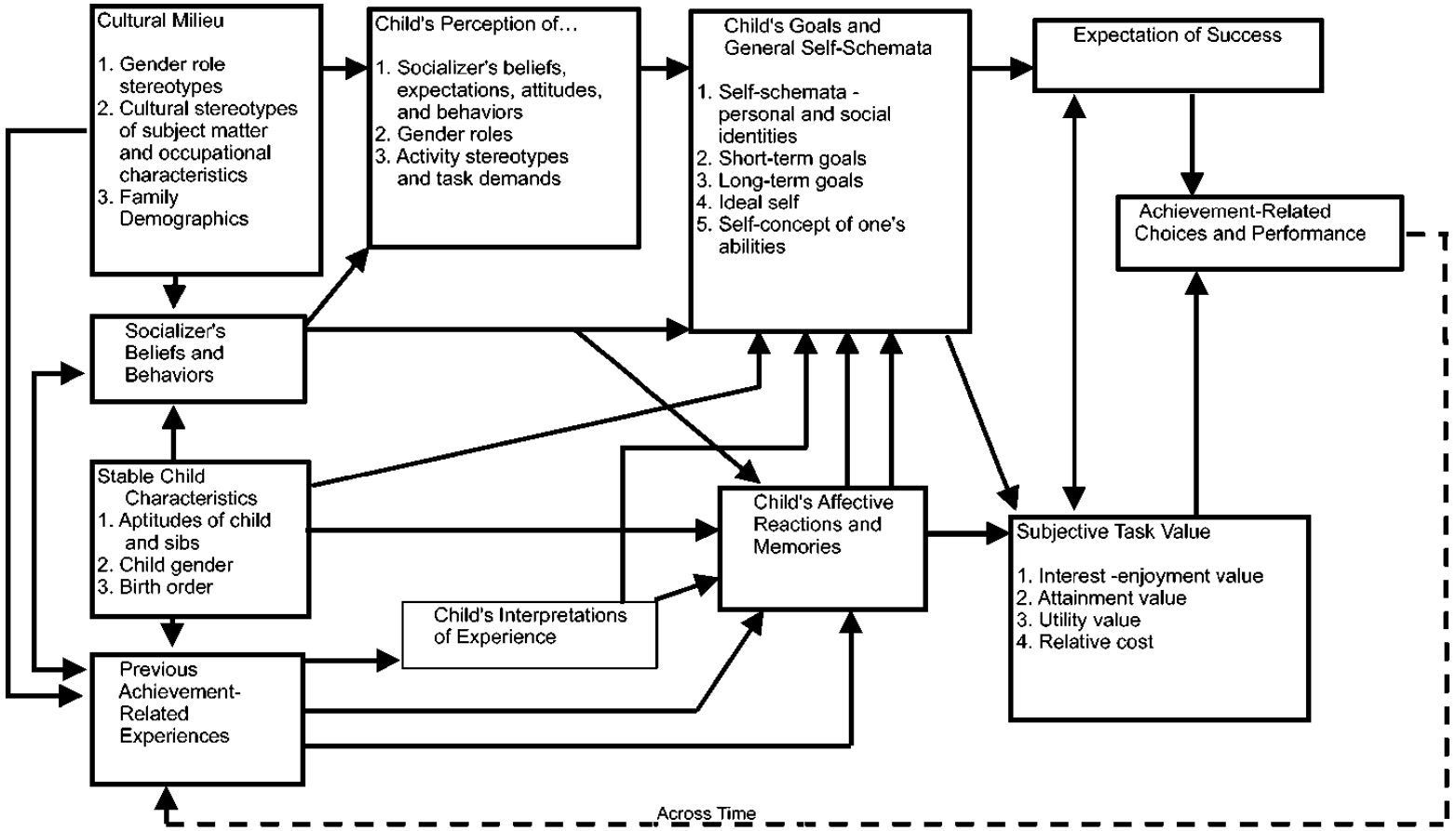


Figure 2. Expectancy-value model of achievement-related choices (Eccles, 2005). *Handbook of competence and motivation,* A. Elliot & C. Dweck (Eds.). Copyright 2005. Copyright Guilford Press. Reprinted with permission of The Guilford Press.

misinformation or a lack of awareness about an activity might result in limited or nonexistent consideration of that option. Third, achievement-related behaviors occur in a complex social context in which there are a wide array of options that also have consequences. Individuals are often faced with a choice between two or more positive options or options that have both positive and negative attributes. In these situations, it is the hierarchy of values – a ranked order of values for various options – that motivates choice behavior. Finally, Eccles and her colleagues assume that the processes outlined in the model are "developmental and dynamic" (p. 108), changing over time as a function of the associated developmental stage and varying through task-specific experiences.

While the influences related to achievement-related choices are numerous, Eccles and her colleagues proposed that these factors contributed to two measurable constructs that motivated such choices: *ability self-perceptions* and *subjective task values*. According to the authors, ability self-perceptions consist of two beliefs that influence expectations for success: perceptions of "domain-specific ability" (Eccles et al., 2005, p. 238) and task difficulty. Individual perceptions of ability in a specific domain (or task) relate positively to expectations for success, while evaluations of the difficulty of a given task relate negatively to expectations. Subjective task values consist of four components: attainment value, intrinsic value, utility value, and cost (p. 239). Attainment value refers to the individual's perceived importance of performing well on a specific task, which relates to personal values. Intrinsic value connects to the enjoyment derived from participating in an activity, while utility value relates to the compatibility of the task with one's short- and long-term goals. Cost consists of the consequences, or sacrifices made, as a result of activity engagement. Attainment, intrinsic, and utility values affected the

"positive valence," or attractiveness, of the activity, while cost affected the "negative valence," or repellant nature, (p. 239) of the activity.

Eccles and her colleagues have published a large volume of work in expectancy-value motivational theory and the associated model of achievement-related choices. In the discussion that follows, the present researcher selected studies related to the development and testing of the scales (Eccles et al., 1983; Eccles et al., 1989; Eccles & Wigfield, 1995; Wigfield et al., 1991) and their use in instrumental music (Eccles, Wigfield, Harold, & Blumenfeld, 1993; Wigfield et al., 1997). This section includes studies that described the testing and development of the expectancy-value scales used in the present study and concludes with examples of recent scholarship incorporating this theoretical framework in music education.

In some of the literature reviewed in this section, researchers utilized scales for which the reliability measure (Cronbach's alpha) fell below the threshold of .70 that is traditionally considered an acceptable level (Nunnally, 1978). In each of these instances, the authors of those studies reported no alternative threshold for determining scale reliability and did not address the alpha values below the traditional threshold of .70. While low scale reliabilities are generally a cause for concern, previous researchers do not seem to have raised these issues. Therefore, the present researcher chose to present the results as reported by the original authors and to use additional measures of reliability, such as the mean inter-item correlation (Pallant, 2010), in evaluating the scales in the present study when necessary.

Eccles et al. (1983) initially tested the model by examining sex differences in advanced mathematics course enrollment over two years with students in grades 5-12,

their teachers, and parents. This initial test involved a variety of measures to explore various constructs related to achievement-related choices. In this report, Eccles and her colleagues focused more on the testing of the theoretical and developmental aspects of the model than on the scales themselves. Therefore, this summary focuses on the constructs upon which Eccles and her colleagues later built the expectancy-value scales.

Eccles et al. (1983) reported differences in perceptions of math between males and females. Males believed math was easier, more useful, and required less effort than females. Males also had higher expectations for their future performance in math courses than females, despite achieving similar scores on standardized math tests. There was no difference between groups regarding evaluations of, or expectations for, current performance in math. Effects for grade level were stronger than those for sex. As students got older, they became less interested in math, rated their performance and abilities lower, and had lower expectancies for their current and future math performance. For all participants, perceptions of ability correlated positively with perceived values for math, expectations for success, math grades, and plans to continue taking math. Self-perceptions of ability correlated negatively with difficulty of math.

The results of a path analysis provided support for the theoretical model in testing the direct and indirect relationships between a set of variables using multiple regression. Perceptions of value for math directly influenced intentions to continue taking math classes. Values and expectations related to self-perceptions of math ability, which – along with performance – significantly predicted math grades in the second year of the study for both males and females. The authors reported that the path analysis indicated the variables in the model, using first-year data, explained 68 to 78% of the variance in

expectancies, 32 to 46% of the variance in task value, and 32 to 36% of the variance in course plan. Eccles at al. (1983) stated that the results of the path analysis indicated that predicting variations in expectancies was easier than predicting variations in task values. The authors suggested that perceptions of value were more important in decisions to enroll in math, while perceptions of ability were more important in performance, concluding that these results supported the theoretical model of influences on achievement-related behaviors.

As part of a longitudinal study on transition into adolescence, Wigfield et al. (1991) and Eccles et al. (1989) examined changes in the self-esteem, self-perceptions of ability, and importance of math, English, social activities, and sports among students moving from elementary to middle school. Wigfield et al. reported the scale for self-perceptions of ability contained two items for each subject and each scale had Cronbach's alpha coefficients that exceeded .60, with "nearly all" (p. 554) between .78 and .90. The authors provided no explanation for the use of this value instead of the typical threshold of .70. Eccles et al. reported the alpha values for these scales to be above .70. (The samples in these studies came from the same larger study, but there were different numbers of participants; 1,850 in Wigfield and 1,450 in Eccles.) The importance scale contained only one item for each subject. The summary that follows focuses on the results related to ability self-concept and importance.

Wigfield et al. (1991) found that self-perceptions of ability and importance, termed "liking" (p. 552) in the report, decreased immediately after the transition to middle school. The authors attributed this change to the disruption in students' social lives in moving and adapting to a new school. During the seventh grade, perceptions of

ability in social activities and sports and the importance of English and social activities recovered. There was a difference between sexes in ability self-concept, with boys reporting higher ability in sports and math and girls reporting higher abilities in English. Eccles et al. (1989) reported that perceptions of ability were most important for social activities, followed by math, English, and sports across all four data collection points over two years. There was an overall decrease in perceived ability for social activities during that period. Eccles et al. examined changes in the stability of participants' evaluations of ability and importance. During that same period, stability increased for both sexes through the transition, and few differences existed in ability and importance between genders in this regard. Most of the differences between these groups existed in sports, where boys' beliefs were more stable than girls'.

Eccles and Wigfield (1995) examined task values and self-perceptions of ability and task difficulty in mathematics among students in grades 6 to 12 to assess the dimensionality and relationships between these factors. Eccles and Wigfield conducted separate exploratory factor analyses with each set of items measuring ability self-perceptions, task values, and task difficulty. A one-factor solution provided the best fit of the data for *ability self-perceptions*, with all 10 items loading above .50. The researchers retained the five items loading greater than .70 for subsequent analyses. For the nine *task values* items, the analysis revealed that a two- or three-factor solution provided the best fit the data, so the researchers tested both in the confirmatory analysis. The authors removed two items that did not load highly on any factor, but did not report the loadings. (The lowest factor loading for retained items was .54.) A two-factor solution was the best fit of the data for the 10 *task difficulty* items, and the researchers removed three

items that did not load highly on any factor. Again, the authors did not report the factor loadings for the removed items, but the lowest factor loading for the retained items was .59. This left 19 scale items; a principal components analysis performed on responses to these items indicated that a three-component solution best described the data. The seven items for *task difficulty* loaded on the first component, the seven *task value* items loaded on the second component, and the five *ability self-perception* items loaded on the third component.

In the next stage of analysis, Eccles and Wigfield (1995) performed a confirmatory factor analysis to test hypotheses regarding the structure of the factors and to compare models. In this two-year study, the authors developed models using the first-year data and tested the models with the second-year data. The first set of analyses examined task values, ability self-perceptions, and task difficulty separately. For task values, Eccles and Wigfield reported that the goodness-of-fit criteria indicated a three-factor model consisting of *intrinsic interest*, *extrinsic utility*, and *attainment values*, which the second-year data confirmed. The relationship between factors was strong and positive (Year 1 data: *importance* and *interest*, $r = .78$; *utility* and *interest*, $r = .55$; *utility* and *importance*, $r = .72$; Year 2 data: *importance* and *interest*, $r = .78$; *utility* and *interest*, $r = .67$; *utility* and *importance*, $r = .78$). The confirmatory factor analysis of the ability items revealed a one-factor solution provided the best fit of the data and included the items related to ability, expectancy, and competence for both years of data. The authors labeled this factor *ability/expectancy*. The goodness-of fit-indicators for the confirmatory analysis of the task difficulty items revealed that a two-factor solution provided the best fit of the data. Items related to *task difficulty* loaded onto one factor and perceptions

regarding *required effort* loaded onto the second factor. The relationship between both factors was strong and positive. Eccles and Wigfield confirmed the factor structure for the entire 19-item scale and found that a six-factor model provided the best fit of the data with all items loading highly on the expected factor. The year two data confirmed the factor structure and factor loadings.

Relationships between the factors confirmed Eccles and Wigfield's (1995) a priori hypotheses. Positive relationships existed between the factors within values and task difficulty. There was a high correlation between the task values factors, suggesting that adolescent perceptions of difficulty and effort for math were related. However, there was no relationship between reported effort and either difficulty or perceived effort. Results indicated a moderately strong relationship between values and ability, suggesting that adolescents value what they do well. The relationship between ability and extrinsic utility value was weak, with ability more strongly related to attainment/importance and intrinsic interest. Data analysis further indicated negative relationships between task difficulty and both ability and task values, with a particularly strong relationship between ability and difficulty, suggesting that adolescents do not value, or do not believe they are good at, activities they find difficult. The Cronbach's alpha coefficients for the each of the scales are reported in Table 1. Eccles and Wigfield reported the reliabilities for these scales were acceptable, but did not provide a guideline for making this determination.

While research testing the expectancy-value model in adolescent populations was important for the present study, equally important were studies focused on testing these constructs in music. Eccles, Wigfield, Harold, and Blumenfeld (1993) extended the expectancy-value theoretical framework to examine instrumental music and students at

Table 1

Scale Reliabilities for Expectancy-Value Scales

Scale	Cronbach's alpha
Intrinsic Interest Value	.76
Attainment Value/Importance	.70
Extrinsic Utility Value	.62
Ability/Expectancy	.92
Task Difficulty	.80
Required Effort	.78

the elementary level, both of which were previously untested. The authors modified scale items from earlier research by Eccles and her colleagues that examined early adolescents' beliefs and values regarding math, English, sports, and social activities. Eccles et al. (1993) used the scales to measure competence beliefs and subjective task values for math, reading, sports, and instrumental music among students in the first, second, and fourth grades as part of a longitudinal study. The review presented here focuses on the analysis of the scales and the results related to instrumental music.

Eccles et al. (1993) conducted exploratory and confirmatory factor analyses to confirm the two-factor model for competence beliefs and subjective task values in each domain and grade level. In the exploratory factor analysis, all of the items related to competence beliefs loaded on one factor and all of the items related to subjective task values loaded on a second factor above .60. In the confirmatory factor analysis, the authors tested null, one-, and two-factor models for each activity domain. To assess the fit of these models, the authors used four different indicators: chi-square; chi-square divided by degrees of freedom, for which a score above 2.0 indicates a very good fit

(Carmines & McIver, 1981); goodness-of-fit index (GFI), (Jöreskog & Sörbom, 1984, as cited in Eccles et al., 1993), for which a score above .9 indicates a very good fit; and the Tucker-Lewis (1973) index (TLI), for which a score above .9 suggests a very good fit.

In testing models, Eccles et al. (1993) compared each grade level and found that the two-factor model provided a better fit of the data than the one-factor model. The results of the four goodness-of-fit indicators for the music domain are provided in Table 2. Reliabilities for both scales in instrumental music were acceptable (competence beliefs, $\alpha = .73$; subjective task values, $\alpha = .82$), despite the small number of items. There were seven total items for the instrumental music scales (four items for competence beliefs and three items for task values) compared to 10 scale items each for the other subjects (six items for competence beliefs and four items for task values).

Table 2

Goodness-of-fit Indicators for Music Domain Reported by Eccles et al. (1993)

	One-Factor Model				Two-Factor Model			
Grade level	Chi-sq	Chi sq/*df*	GFI	TLI	Chi-sq	Chi sq/*df*	GFI	TLI
First	181.49	12.96	.86	.44	15.13	1.16	.98	.99
Second	132.60	9.47	.86	.78	12.10	1.64	.98	.98
Fourth	104.53	7.47	.88	.83	51.69	3.94	.94	.93

Eccles et al. (1993) reported significant differences for both competence beliefs and subjective task values between grade levels and sex regarding instrumental music. The means for both competence beliefs and subjective task values among first and second graders were significantly higher than those of fourth graders. The authors reported significant differences between grade levels and gender for both competence beliefs and

subjective task values for instrumental music. The strongest effect sizes for grade level differences existed in instrumental music and reading for both scales, with the highest means for first grade students, followed by second, and then fourth grade in both subjects. Results also indicated that girls held significantly higher competence beliefs and subjective task values for instrumental music than boys. Eccles et al. concluded that children differentiated between self-perceptions of ability and task values as early as first grade with little change in these perceptions through the early to middle elementary years.

Eccles et al. (1993) suggested that the order of competence beliefs across activities predicted activity choice and persistence better than competence beliefs in a single activity alone. Boys' competence beliefs fell into three clusters: highest for sports and throwing, followed by reading and math, and lowest for instrumental music and tumbling. Girls' competence beliefs formed two clusters: reading, tumbling, and throwing followed by math, sports, and music. Boys valued sports the most, followed by math and reading and then instrumental music. Girls valued reading the most, followed by sports, instrumental music, and math. Overall, the means for competence belief in instrumental music were the lowest of all six activity domains for both boys and girls. The means for the subjective task value of instrumental music was the lowest of all four school subjects for boys and constituted the penultimate subject for girls.

Eccles et al. (1993) concluded that younger children held significantly higher competence beliefs than older children in most domains with fewer differences across grade levels for subjective task values. The differences in means across domains between genders for competence beliefs and subjective task values reflected cultural stereotypes.

Boys' competence beliefs and values were higher in sports, while girls' were higher in reading and instrumental music. The authors expressed surprise regarding the gender differences in instrumental music as the only instance in which the beliefs among children were opposite those observed in the adult world, where "the majority of instrumental musicians in both orchestras and rock bands are male" (p. 845). Eccles et al. posited that elementary students were either unaware of these gender differences, or more influenced by the presence of primarily female music teachers at that grade level. Very few of the children in the study had experience with instrumental music, as formal instrumental instruction in school did not begin until the fourth grade. As a result, Eccles et al. suggested that experience in a given domain was not necessary to form self-perceptions of ability and value.

In a longitudinal study, Wigfield et al. (1997) examined the development of self-perceptions, task values, and activity choices in math, reading, sports, and instrumental music. In addition, this study included evaluations of children's competence by teachers and mothers. The authors measured three cohorts of students in first, second, and fourth grades every year for three years, extending the sample to grades one through six over the course of the study. Scale items included competence beliefs and subjective task values divided into two categories: interest and usefulness/importance. Internal consistency reliabilities, measured using Cronbach's alpha coefficients, were good to excellent for competence belief (.74 to .90) and interest (.73 to .92) across all subject areas and times of measurement. Reported reliabilities for usefulness and importance were low in year one for math, reading, and sports (.36 to .57) but higher in the second and third year (.61 to .88) across all domains and times of measurement. The number of items in the

usefulness/importance scale was small, which may have affected the Cronbach's alpha values. In the first year, there were four items in the scale for math, reading, and sports and three in the music scale. In the second and third years, the authors added two items to each of the scales, which may have assisted in raising the Cronbach's alpha values. However, the authors did not report the alpha values for the individual scales, only the range, so one cannot discern which scales reached an acceptable level of reliability. As stated previously, the researcher decided to consider additional measures of reliability (e.g., mean inter-item correlations) for the scales as needed in the present study.

The results indicated significant effects of sex and cohort on competence beliefs in instrumental music. Wigfield et al. (1997) analyzed both linear and quadratic trends for time of measurement, finding both to be significant in instrumental music. Competence beliefs decreased over time for the two youngest cohorts with the strongest decreases in instrumental music. In addition, competence beliefs decreased more between years two and three than between years one and two for all cohorts. The change for the oldest cohort showed an inverted U-shaped pattern in which competence beliefs were significantly higher in fifth grade than for fourth and sixth grade, which were not significantly different from each other. Competence beliefs were the lowest for instrumental music of all subject areas, with gender differences varying little over time. Girls held significantly higher competence beliefs regarding reading and music than boys, who held significantly higher beliefs about their abilities in math and sports than girls.

Wigfield et al. (1997) reported significant effects of gender, cohort, and time of measurement on usefulness and importance in instrumental music. However, because the level of reliability for this scale in music was not specified, the results should be

interpreted with caution. Each cohort had less positive values for the usefulness and importance of instrumental music over time and all cohorts rated instrumental music the lowest of all subjects. In comparison to boys, girls believed instrumental music and reading were significantly more useful and important. In comparison to girls, boys believed sports were significantly more useful and important. The results also revealed significant effects of gender and time of measurement on interest in instrumental music. Interest decreased significantly for all cohorts, with the strongest linear trend in instrumental music. All participants rated instrumental music second in interest in year two but last in year three.

Because the scale reliabilities were lower among the youngest participants for usefulness and importance of the activities measured, Wigfield et al. (1997) reported correcting "for attenuation in the relations of usefulness and importance to the other variables " (p. 454) in the correlational analyses. While the authors reported making this correction, which calculates the correlation estimates in a manner that accounts for the measurement error of the scale, they did not detail the exact procedures used. However, Wigfield et al. did report that "the significant differences remained in all domains" (p. 460) after this correction was made. This statement suggested that the attenuation procedure supported the significant relationships identified in the results prior to the correction, but did not result in the identification of additional of significant relationships between the variables. The correlations between competence beliefs and interest, as well as competence beliefs and usefulness/importance, were significant in instrumental music. Results indicated significant grade-level differences in correlations for beliefs and interest between second and sixth grade. Mothers' evaluations of children's competence

correlated significantly with both competence beliefs and interest for second through sixth grade with teachers' evaluations of competence only significantly correlated with children's beliefs for grades five and six and interest in sixth grade.

Wigfield et al. (1997) concluded that, as children age, their competence beliefs and values generally decreased, became more stable, related positively to each other, and related more closely to parent and teacher evaluations. They also found that stereotypical gender differences became established in young children and change little over time. Explaining the strongest decline for instrumental music competence beliefs and values, the authors referred to an earlier finding by Eccles et al. (1983) in which a lack of belief and value for an activity led to a decreased likelihood of engagement in it. Wigfield et al. suggested that the lack of exposure to instrumental music until late elementary school, along with decreasing beliefs and values that occur at that developmental stage and "the instructional practices used in American schools" (p. 463), may all contribute to the pattern of decline in belief and value for instrumental music.

In summary, these studies supported the existence of six components within two constructs related to achievement-related choices: perceptions of ability and task values. Ability self-perceptions evolved out of the expectancy-value motivational theory, in which perceptions of ability and expectations for success motivated choice behaviors regarding the both the selection of activities and subsequent achievement. Within ability self-perceptions, the authors identified two beliefs that interacted in the formulation of expectancies for success in a given activity. Self-perceptions of ability related positively to expectancies, while perceptions of task difficulty related negatively to expectations for success. In addition, within task difficulty, the authors identified two sub-scales, one

related to the difficulty of a particular task and a second related to the amount of effort required to be successful.

Within the task values construct, the authors identified three sub-scales measuring the intrinsic interest value (interest), extrinsic utility value (usefulness), and attainment value (importance) of a given task. Perceptions of interest, usefulness, and importance related positively to achievement-related behaviors. Other researchers (Hurley, 1992; McPherson & Hendricks, 2010; McPherson & O'Neill, 2010; O'Neill et al., 2001) have found the scales to be reliable in examining multiple school subjects and activity domains, including music, with students from elementary through high school. The instrumental music scales comprised a reduced version of the full expectancy-value scale measuring perceptions of ability and task values. The Crohnbach's alpha coefficients did not meet the threshold of .70 for reliability for the extrinsic utility subscale and the authors did not express any concerns about this result. The inclusion of other measures to assess the scale might have provided greater confidence in its reliability, and for this reason, the present researcher decided to examine mean inter-item correlations as necessary in evaluating the reliability of the scales used in this study.

Expectancy-value in music education. Other researchers have examined motivations for studying music through an expectancy-value theoretical lens. Hurley (1992) used the scales to compare motivations to enroll, continue, and discontinue string instruction among four groups. These groups were fourth grade beginners, sixth grade "continuers," and two groups of "discontinuers" (p. 107): one consisting of students perceived by teachers to be promising musicians ("discontinuers A," p. 107) and another consisting of students perceived by teachers to lack the skills to become successful

musicians ("discontinuers B," p. 107). All groups enrolled in music out of intrinsic interest except for discontinuers B, whose motivations were extrinsic. Continuers expressed positive changes in motivation, and they were willing to work harder or give up other activities to devote time to their instruments. Discontinuers experienced motivational changes that placed increased importance on other activities, such as sports, band, or study hall. For these students, the cost of effort was too great when other opportunities were available, suggesting a hierarchy of values related to activities.

Eccles, O'Neill, and Wigfield (2005) reported the use of the scales for instrumental music in a longitudinal study conducted by O'Neill et al. (2001). These scales were part of the four-year, Youth Participation in Music Activities study of 1,500 elementary and secondary students in the United Kingdom. The authors confirmed a two-factor model of competence beliefs ($\alpha = .84$) and task values ($\alpha = .95$) and verified the predictive validity of the model in relation to participation in instrumental music. Instrumental music participants reported higher competence beliefs and task values than nonparticipants and those who had discontinued their tuition. Girls held higher beliefs and values on this measure than boys, and all respondents held higher values than beliefs. O'Neill et al. discovered similar correlations for ability and instrumental playing in school (formal) and outside of school (informal), though values were more highly correlated with informal than formal playing.

Using the expectancy-value theoretical framework, McPherson and his colleagues compared secondary students' motivations to study music to their motivation to study other school subjects (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010). The researchers examined student motivations in art, mathematics, native language, music,

physical education, and science across three grade levels (i.e., upper elementary/middle school, lower secondary, and upper secondary) in eight countries: Brazil, China, Finland, Hong Kong, Israel, Mexico, and the United States. The researchers drew comparisons between music learners, defined as those who studied an instrument or voice inside or outside of school, and non-music learners. The international results (McPherson & O'Neill, 2010) indicated that competence beliefs and values for all subjects decreased significantly with age, while task difficulty increased significantly with age.

The results of both studies indicated significant differences between music and non-music learners. In the international study, McPherson and O'Neill (2010) found that music learners reported significantly higher competence beliefs and values for music and significantly lower task difficulty than non-music learners. This was also true for students in the United States study (McPherson & Hendricks, 2010). American music learners also reported significantly higher interest in music inside and outside of school and perceived expectations of parents than non-music students. Overall, American students reported significantly lower competence beliefs and values for music and art than for all other subjects.

McPherson and O'Neill (2010) reported similar findings between countries, with the exception of Brazil in some analyses. Students ranked competence beliefs and values in music lower than all other subjects, yet considered music the easiest of all subjects in all countries except Mexico. Females held higher competence beliefs and lower task difficulty for music in all countries except Brazil and reported higher values for music than males in all countries except Brazil and China. Across all eight countries, music

learners reported greater competence, but lower value, for music compared to other subjects and believed that music was easier than other academic subjects.

Using data collected during the international comparison study, McPherson and Hendricks (2010) provided a deeper look at the motivations of American students to study music, comparing interest in music inside and outside of school between three grade levels. Level 1 consisted of students in grade 6, level 2 consisted of students in grades 7-9, and Level 3 consisted of students in grades 10-12. The authors discovered an interesting trend regarding student interest in school music at key transition points; interest decreased between levels 1 and 2, but increased between levels 2 and 3. This increase in interest was in opposition to a general decrease in student interest for all subjects by grade level and the only significant increase at any point, although students ranked music significantly lower than all other school subjects. As was true for the international study (McPherson & O'Neill, 2010), non-music learners in the US reported lower competence beliefs, values, and higher task difficulty than their music learner peers. Non-music learners also reported lower parental expectations than music learners.

While interest in school music was lower than all other subjects, student interest in music outside of school was high. Music ranked second highest among all subjects, after physical education, regarding interest outside of school for students in levels 1 and 2, while students in level 3 ranked music highest, with physical education second. As was the case for interest in school subjects, interest in subjects outside of school also decreased by grade level. The only significant increase in student subject interest outside of school existed for music between level 2 and 3.

McPherson and O'Neill (2010) suggested that international non-music learners' lower competence in, and value for, music compared to other academic subjects, as well as the lower value for music held by music learners, may be reflective of the general public's misconceptions regarding the purpose of music education. The authors argued that the general public's view of academic subjects as more important than music, combined with fixed entity (i.e., talent-based) views of musical ability, may have negatively influenced students' decisions regarding participation in music at school. In the US, students' low competence beliefs, value, and interest in school music stood in sharp contrast to their high interest in music outside of school. McPherson and Hendricks (2010) suggested that these differences, along with the high value for sports outside of school, indicated a misalignment between students' views of music as an academic subject versus music as a leisure activity. The authors recommended broadening music education in the United States to include self-guided learning and opportunities beyond "competition and performance repertoire" (p. 209); if followed, this recommendation might provide an avenue for the students to express themselves and engage more of "the other 80%" (D. B. Williams, 2007, para. 5).

Other motivational theories in elective choice. Expanding beyond the expectancy-value framework to include other motivational theories, Waters, McPherson, and Schubert (2014) examined secondary male students' reasons for participation and nonparticipation in music and sports. This research explored dimensions from expectancy-value, self-determination, and ecological motivational theories, which allowed the researchers to explore multiple individual and social environmental factors (e.g., attitudes of parents and teachers, community activities, and structure of the course)

discovered in previous research to influence adolescents' elective choices. Self-determination theory (Ryan & Deci, 2000) focuses on individual attitudes and social support in two areas: planned behavior and basic needs. Individual attitudes and perceptions of support influence *planned behavior*, while *basic needs* are psychological requirements like competency and autonomy that, once met, motivate behavior. Ecological theories of motivation recognize the influence of both individual and social factors on elective choices, including sports participation and elective enrollment. Luke and Sinclair's (1992) research investigating facilitators and impediments to sports participation found social factors to be the most important.

Waters et al. (2014) measured facilitators and impediments to music and sports participation using two similar, though not identical, scales, which meant the results between categories could not be compared. The authors found that the highest facilitators and impediments for music and sport were individual, not social environmental factors, with the most influential facilitator being student interest in the subject. The least influential impediment for both music and sports was parental influence. Impediments to music participation were higher than those for sports, with all music impediments ranking above the mid-point except for parental influence. Significant differences existed between music and sports for both facilitators and impediments. For music, the most important facilitator was student interest, followed by importance as a subject, intention to continue music after schooling, competency in music, and regard for the teacher. The most important music impediment was lack of enjoyment for theory, followed by lack of interest in history, no intention to continue music after schooling, lack of competence in music, and lack of importance as a subject.

Dimensions of all three motivational theories existed among both facilitators and impediments, suggesting that both individual and social factors influenced student elective choice for music and sports. The results showed that parental influence was the least important facilitator and impediment for music and sports, leading Waters et al. (2014) to suggest that adolescents may use these activities as vehicles for identity formation and independence. The authors encouraged music educators to cultivate an appreciation for the usefulness and importance of music as a school subject and to assist students with envisioning personal musical futures in order to make the study of music more personally meaningful.

These studies provided insight into choice behaviors regarding course and activity selection for students across the world through an expectancy-value theoretical lens. Eccles et al. (1983) concluded that the model of achievement-related choices "suggests that students interpret the external reality to which they are exposed and form concepts of their abilities and opinions about both the difficulty and the importance of various activities based on these interpretations" (p. 99). Researchers confirmed this to be true for students in music, who found that music students held significantly higher beliefs in their musical abilities and values for music and significantly lower perceptions of musical difficulty than non-music students (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010). Extending this framework to compare musical activities inside and outside of school with one sample in the United States, music was the highest ranked subject for interest outside of school (McPherson & Hendricks, 2010). In examining multiple motivational theories, Waters et al. (2014) found that interest was the greatest facilitator for musical participation. Taken together, these studies indicated that students

who believed they were musical and who found music interesting, valuable, and easy participated in music at school, while the opposite is true for those students who did not enroll in such courses.

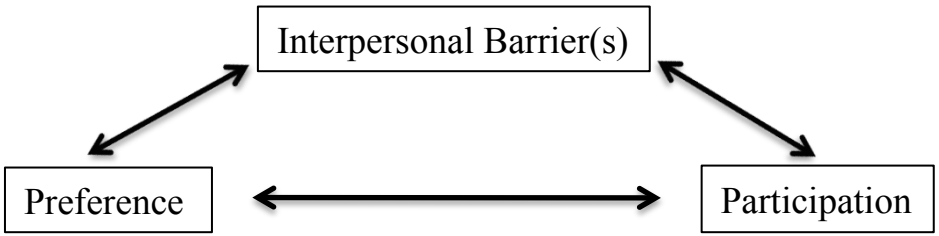
Constraint Negotiation Theory

The theory of constraint negotiation first emerged in leisure studies research as three separate conceptual frameworks for explaining barriers to leisure activity, which were later integrated into a single, hierarchical model. From this hierarchical model of leisure constraints, the theory of constraint negotiation emerged to describe the manner in which individuals encountered and overcame constraints to leisure activities. Constraint negotiation theory posits that participation in any activity is the result of successfully navigating the obstacles to participation, and, when these obstacles are perceived as insurmountable, they become barriers resulting in nonparticipation.

In a seminal paper on this topic, Crawford and Godbey (1987) proposed a conceptual framework that related leisure barriers to both activity preference and participation and included a sociological component, which marked a departure from the leisure studies literature at the time. Previous researchers conceptualized barriers as intervening forces that only operated between preference and participation. In this view, barriers obstructed an individual's desire to engage in a preferred activity, resulting in nonparticipation. Crawford and Godbey suggested that barriers may not only influence participation, but may also affect activity preference. Previous research also primarily focused on the experiences of individuals as they determined which activities to pursue. Crawford and Godbey proposed that patterns in family leisure suggested an interpersonal dimension not previously explored. Borrowing from Lewin (1951), Crawford and

4a.

4b.



4c.

Figure 3. Three types of leisure barriers proposed by Crawford and Godbey (1987), *Leisure Sciences, 9*, pp. 123-124, reflecting adaptations by Crawford et al. (1991), *Leisure Sciences, 13*, pp. 311-312. Reprinted with permission of Taylor & Francis.

Godbey defined *leisure barriers* "in a social-psychological manner to denote internal (intrapersonal) psychological states, attributes, and characteristics, and external (interpersonal and situational) circumstances which are experienced as individual behavior 'restraining forces'" (p. 122). The parenthetical terms refer to the three types of barriers that the authors believed operated in the context of a relationship between preference and participation.

Crawford and Godbey (1987) described the relationships of each barrier type in terms of activity preferences and participation, resulting in three separate leisure barrier models (Figure 3). *Intrapersonal barriers* (1A) were "individual psychological states and attributes which interact with leisure preferences rather than intervening between preference and participation" (p. 122). These barriers may change over time or be influenced by social factors, but are individually experienced at the psychological level. Examples of intrapersonal barriers include self-perceptions of skill, evaluations of the appropriateness of activity involvement and availability of the activity, and previous socialization in activities. *Interpersonal barriers* (1B) were "the result of interpersonal interaction or the relationship between individuals' characteristics" (p. 123). These barriers interacted with both preferences and participation and appeared in familial and other interpersonal relationships. Examples of interpersonal barriers included the lack of a partner to participate in an activity (e.g., tennis) or finding others interested in the same activity (e.g., playing bridge). *Structural barriers* (1C) referred to "constraints as commonly conceptualized, as intervening factors between leisure preference and participation" (p. 124). Structural barriers obstructed activity participation without altering preferences, due to factors such as the availability or perceived appropriateness

of the activity. Examples of structural barriers include financial resources, adequate time for participation, and scheduling conflicts.

In modifying the conceptualization of barriers forwarded by Crawford and Godbey (1987), Crawford, Jackson, and Godbey (1991) proposed the integration of these previous, discrete leisure barriers into a single model in which these barriers interacted, the hierarchical model of leisure constraints (Figure 4). The authors proposed the framework as a way to examine activity participation and nonparticipation while considering the effects of constraints on activity preference and choice. In arranging the levels of leisure constraints, formerly referred to as leisure barriers, they explained that constraints were encountered in a sequence of importance, beginning with the most proximal (i.e., intrapersonal), proceeding to interpersonal, and ending with the most distal (i.e., structural).

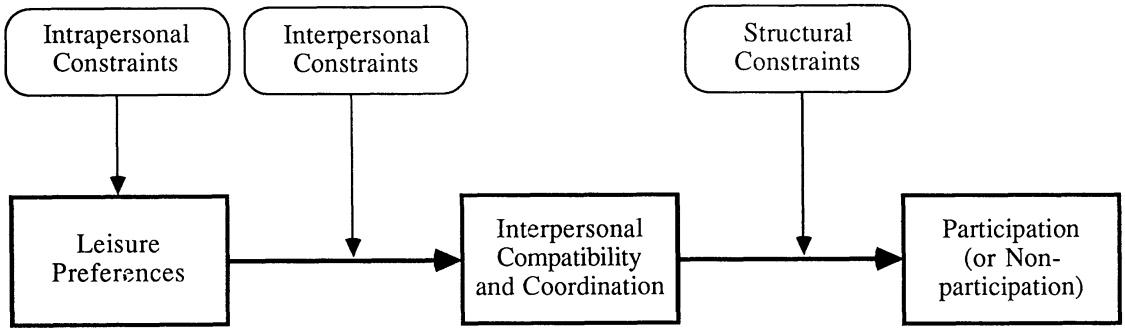


Figure 4. A hierarchical model of leisure constraints (Crawford, Jackson, & Godbey, 1991), *Leisure Sciences, 13,* p. 313. Reprinted with permission of Taylor & Francis.

The rationale for this hierarchical sequence was twofold. First, Crawford et al. (1991) determined that intrapersonal constraints were the most powerful, as

"psychological orientations" (Huston & Ashmore, 1986) that motivated individual behavior. These orientations consisted of three subjective evaluations, similar to those explored by Eccles and her colleagues (Eccles et al., 1983, 2005; Eccles, Wigfield, Harold, & Blumenfeld, 1993; Eccles, Wigfield, & Schiefele, 1998; Wigfield et al., 1997): beliefs about the activity and its appropriateness, preference for the activity, and perceptions regarding individual competence. Second, they explained that the hierarchy of social class influenced the intensity with which individuals experienced activity constraints, a position supported by Searle and Jackson (1985), who discovered unequal distributions and perceptions of barriers based on socioeconomic variables.

Crawford et al. (1991) suggested that the hierarchical model of leisure constraints could be extended to explore how constraints were experienced once individuals participated in an activity. The model for activity specialization extended the participation outcome to explain how individuals encountered constraints during their involvement and the manner in which sustained activity engagement led them towards specialization (Figure 5). The authors clarified that talent or skill, which would seem to function as an intrapersonal constraint, functioned as a structural constraint in the hierarchical model, because these factors intervened between preference and participation, like other structural constraints. Constraints such as talent and skill often appeared later in participation, after individuals had already negotiated other barriers, and inhibited the ability to improve to a point where they could become specialists.

Jackson, Crawford, and Godbey (1993) later introduced the term *constraint negotiation* as a theory connected to the hierarchical model of leisure constraints.

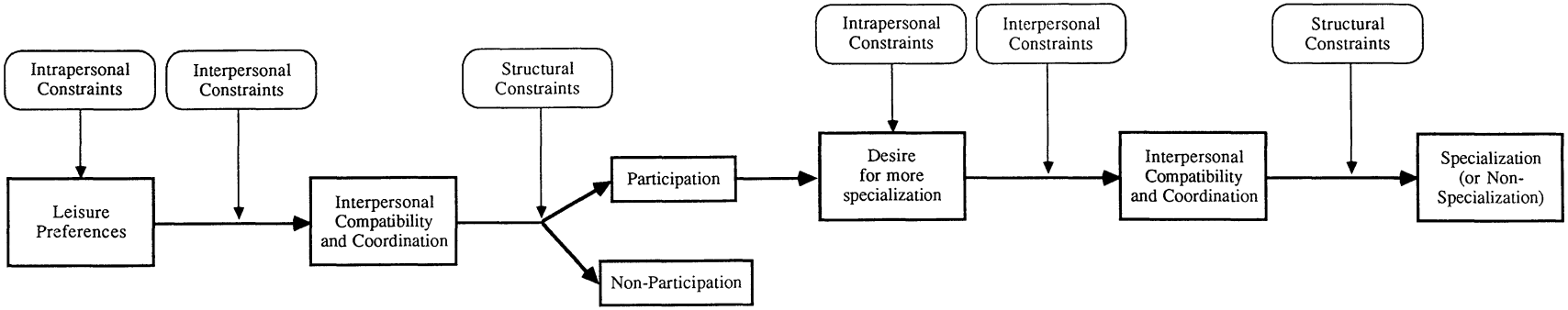


Figure 5. The influence of leisure constraints on activity specialization (Crawford, Jackson, & Godbey, 1991), *Leisure Sciences, 13,* pp. 315-317. Reprinted with permission of Taylor & Francis.

Constraint negotiation focuses on the process through which individuals experience and mediate constraints to leisure activities. In proposing this theory, the authors also distinguished between barriers and constraints. *Barriers* reflected the conventional conceptualization, as insurmountable obstacles that resulted in activity nonparticipation. The term *constraints*, however, allowed for variations in the intensity of obstacles, some of which could be overcome so participation could continue, thus resulting in a process of negotiation. Therefore, the authors proposed that participation is not the absence of barriers but the outcome of successful constraint negotiation. Research by Scott (1991) supported the idea of constraint negotiation as the process of encountering and responding to obstacles in which nonparticipation was only one potential response. Scott explained that, as individuals encountered constraints, they might modify their behavior as a means of negotiation so they might continue their activity involvement, though in a different manner than if no constraints were present. For example, a student who desires to play clarinet in the elementary school band but does not have the financial resources to rent an instrument might use a school instrument. When the student reaches middle school and discovers that the school only has a bass clarinet available, the student may choose to play the bass clarinet in order to continue playing in band.

As individuals anticipate their possible participation in an activity, they are also judging the presence and intensity of constraints and assessing the degree to which they might be successful in resolving them (Jackson et al., 1993). Individual perceptions of constraints can also change the way constraints function and affect activity preference. For example, an individual who considers an interpersonal or structural constraint to be insurmountable may experience the constraint as an intrapersonal barrier, which may

further "suppress the desire for participation" (p. 7). Jackson et al. and Kay and Jackson (1991) described three classifications for people based on two basic responses to constraints, proactive and reactive. Individuals who accepted constraints and chose not to participate in the activity exhibited *reactive responses*. Those who possessed strategies for negotiating constraints and whose participation in the activity was unaltered had *successful proactive responses*, while those who experienced altered participation due to their constraint experience demonstrated *partly successful proactive responses.*

These differences in individual responses to constraints led Jackson et al. (1993) to hypothesize that motivation also played a role in the negotiation process as a counterbalance to constraints. They proposed that the outcome of constraint negotiation might be better described as the "level of participation" (p. 9) rather than the dichotomous outcome of participation or nonparticipation. The authors suggested that the level of participation "may be viewed as a function of the interaction, or balance, between constraints and motivations" (pp. 8-9). The strength of constraints and motivations, as well as the interactions between them, influenced the outcome of the constraint negotiation process and the desire to participate.

The linear arrangement of the model implies that all individuals begin their constraint experience at the intrapersonal level and subsequently proceed through each of the other levels. However, Godbey, Crawford, and Shen (2010) clarified that the model was actually "circular" (p. 124), beginning at whichever level one is located at a given point in time. For example, someone who has previously pursued an activity but moves to a new location where the necessary facilities do not exist must overcome the presence of a strong structural constraint in order for participation to resume. This does not imply

that the individual has not previously navigated intrapersonal constraints, only that the present situation presents a stronger structural constraint that one must overcome in order to participate in the activity.

Crawford and his colleagues (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993) transformed the conceptualization of obstacles and activity participation. The model and theory they proposed distinguished between constraints, which could be overcome so participation could continue, and barriers, perceived as insurmountable and resulting in nonparticipation. Crawford et al. proposed that participation was process in which individuals encountered and negotiated obstacles in order to continue their involvement in an activity. They also concluded that responses to constraints could be proactive, in which individuals used strategies to navigate constraints, or reactive, in which individuals accepted constraints and discontinued their activity participation. In clarifying the linearity of the model, Godbey et al. (2010) described it as a circular arrangement with multiple entry points.

Empirical research. Since the introduction of the hierarchical model of leisure constraints (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993), several leisure studies researchers have tested various aspects of the model, often with contradictory results. Empirical tests provided evidence that each of the three constraint levels existed as separate constructs, based on the results of factor analysis (Hawkins, Peng, Hsieh, & Eklund, 1999; Raymore, Godbey, Crawford, & VonEye, 1993). However, this might be a function of the degree of homogeneity between items within each scale. Hubbard and Mannell (2001) discovered low Cronbach's alpha coefficients for each of the three subscales (intrapersonal = .50; intrapersonal = .55; structural = .42,

overall scale = .72), suggesting low internal consistency within each category. The researchers acknowledged that the diversity of the constraints measured by each sub-scale might have contributed to their low reliability. Hubbard and Mannell described the constraint scores as a function of the frequency and strength of the constraints reported, concluding there was no need to be concerned about low reliability scores. Godbey et al. (2010) supported this position and cautioned against sacrificing content validity (i.e., how accurately the items measure the construct being examined) in order to achieve high internal reliability (i.e., how well different items measuring the same construct produce similar results). A number of researchers have recognized that the array of constraints vary according to the nature of the activity, the characteristics of the population, and the stage of participation and have advocated for research approaches that account for these differences (Godbey et al., 2010; Hawkins et al., 1999; Hubbard & Mannell, 2001).

Researchers have also tested the sequential and hierarchical nature of the leisure constraints model (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993; Godbey et al., 2010) with mixed results. Raymore et al. (1993) and Walker, Jackson, and Deng (2007) supported the sequential hierarchy as proposed, while Gilbert and Hudson (2000) confirmed a two-level model. The results of Hawkins et al. (1999) failed to support the hierarchical nature of the model. Other researchers have confirmed the hierarchy of importance between the constraint levels, finding intrapersonal constraints to be the most influential (Alexandris, Tsorbatzoudis, & Grouios, 2002; Samdahl & Jekubovich, 1997). Godbey et al. (2010) acknowledged that these mixed results might be due to interactions between various factors at all levels that influence the formation of the constraint itself. For example, when an individual participates in an

activity not deemed acceptable by one's peer group, a social factor, it gives rise to individual perceptions that continued involvement might not appropriate, shaping a personal perception that operates as an intrapersonal constraint. Godbey et al. encouraged researchers to move beyond the mere classification of constraints toward studying the influences on, and formation of, constraints. Investigations of the hierarchy of social privilege in the original model supported the impact of social class on constraint perception. Results revealed that lower income individuals reported a higher number of constraints than more affluent respondents (McCarville & Smale, 1993) and uncovered significant relationships between low socioeconomic status and intrapersonal constraints (Raymore et al., 1993).

Anthropologists Chick and Dong (2005) criticized the hierarchical model of leisure constraints for its focus on the individual and ignorance of the role of culture on leisure participation. These authors suggested that the role of culture in the model could have been represented as a separate construct, rather than "inconspicuously spread among their three categories" (p. 171). In response, Godbey et al. (2010) explained that conceptualizations of constraints at all levels are culturally dependent because "culture determines the very operational definitions of each category" (p. 121). Godbey et al. further described how culture shapes individual perceptions of constraints through two types of norms. Imposed *cultural norms* serve as a structural constraint for members who wish to participate in an activity but feel they cannot, due to the societal pressures of their cultural group. Voluntarily *internalized cultural norms* represent intrapersonal constraints, as these values shape individual preferences for participation.

Much of the research regarding the hierarchical model of leisure constraints supports its structure in a variety of activity domains with various populations, which suggests the model may be appropriate for examining school music participation. Godbey et al. (2010) stated that they "intended the model to be a universal framework for explaining the participation or non-participation" (p.124), including occupational preference. In addition, the framework accounts for the various influences (i.e., personal, social, and structural) that underlie students' choices regarding enrollment in school music. Given that the researchers believed the theory "appears to be applicable to a variety of human behaviors" (p. 125), the theory may provide a suitable lens through which we might better understand student participation and nonparticipation in school music.

While several researchers have explored constraint negotiation and the hierarchical model of leisure constraints in a wide array of activities with various populations, the results have been contradictory. In most of these studies, researchers designed survey instruments to fit the needs of the activity and the population under study. While there has been some call for the standardization of instruments to measure constraints, Godbey et al. (2010) cautioned against prioritizing internal consistency over content validity. Additionally, the influence of interactions between constraints and factors at various levels and their role in the formation of constraint perceptions might also explain some of the contradictory findings of previous research.

In examining the mixed results between these studies, the present researcher emerged with two principles that guided this project. First, the researcher recognized the importance of designing constraint scale items germane to musical participation and

nonparticipation in the context of a K-12 school. This principle was key in the design of the survey instrument in selecting and creating constraint scale items. Second, the researcher recognized that conforming too quickly to the established a priori constraint categories in the planned principal components analysis could result in predictors that might not be useful in explaining participation and nonparticipation in school music. This encouraged the researcher to allow the grouping of items to emerge from the data and resulted in a thorough consideration of a number of potential component models.

Use of Theoretical Frameworks in the Present Study

The researcher grounded this study in two theoretical frameworks: expectancy-value theory to explore motivations for choosing music courses, and constraint negotiation theory to examine whether and how perceived obstacles influence participation in school music. The researcher used the expectancy-value scales (Eccles et al., 1983; Eccles et al., 2005; Eccles et al., 1993; Eccles et al., 1998) to measure self-perceptions of musical ability, musical task difficulty, and musical task values. The scales created for these studies were domain-specific in their construction, exploring students' perceptions and values for specific school subjects (i.e., reading, math, instrumental music, and sports). Eccles et al. (2005) reported using the scales to examine achievement and to predict course enrollment, with subjective task values related most strongly to enrollment decisions. The authors reported that the three subjective task value scales (i.e., interest, importance, and utility) could be used "independently or together as a superordinate [combined] scale" (p. 243) with boys and girls, grades 5-12, and with diverse populations.

The scales were appropriate for this study, because they have been tested and found to be reliable and valid for use in instrumental music and with adolescents (Eccles, 2005; Eccles et al., 1983; Eccles et al., 1989; Eccles et al., 1993; Eccles et al., 2005; Eccles & Wigfield, 1995; Wigfield & Eccles, 2002; Wigfield et al., 1991, 1997). The researcher used the quantitative data collected in this study to compare motivations for studying music between music participants and nonparticipants and to examine their ability to predict music participation, as suggested by Eccles et al. Recent scholarship also supported the use of these scales to explore music as a secondary school subject. McPherson and O'Neill (2010) used the subjective task values and ability self-perception scales to explore motivations to study music compared to five other school subjects among secondary students in eight countries. As part of this international study described previously, McPherson and Hendricks (2010) used the scales to compare subjective task values for music inside and outside of school in the United States, as does the present study.

The present investigation also explored constraint negotiation theory (Jackson et al., 1993) by testing the hierarchical model of leisure constraints (Crawford et al., 1991), derived from research in the field of leisure studies. The theory of constraint negotiation was appropriate for the present study because it was originally conceived to explain participation and nonparticipation in leisure activities, in which individuals exercise choice behaviors. Since music in secondary schools is often considered an elective course option for students (a choice), the way in which constraints operate to restrict or inhibit students' choices provided a useful theoretical framework for examining school music participation and nonparticipation.

The process through which students choose elective courses at the secondary school level is similar to the process of choosing leisure activities, moving from preference to participation as outlined in the hierarchical model of leisure constraints (Jackson et al., 1993). Individual interests, social influences, and external factors facilitate student engagement in desired elective courses, avoidance of less desirable electives, or some manner of compromise in participating in such courses. The theory of constraint negotiation as a process toward participation or nonparticipation in school music may help us to better understand how students perceive constraints, how encountering these constraints affects their level of participation, and how they navigate constraints as they engage in music coursework in the secondary school setting. While the extent to which these constraints operate in a hierarchical manner (Crawford et al., 1991) in regard to school music participation were largely unknown prior to the present study, Godbey et al.'s (2010) assertion that the model and theory may be applied to a variety of other behaviors involving preference confirmed the plausibility.

The present researcher selected the expectancy-value and the constraint negotiation theoretical frameworks because they were complementary to each other. Crawford and Godbey (1987) explained that they predicated the hierarchical sequence of constraint levels on the subjective evaluations that motivated individual behavior, thus making intrapersonal constraints the most important level. These evaluations included beliefs about and preferences for the activity and perceptions regarding competence, which mirror the subjective task values and competence beliefs of the expectancy-value framework. In turn, the expectancy-value motivational theory suggests an array of

constraints that operate on the intrapersonal level (i.e., individual perceptions, values, and beliefs) that drive behavioral choices.

The previous sections traced the development of the expectancy-value and constraint negotiation theoretical frameworks and their use in the fields of educational psychology and leisure sociology. The next section presents literature in related fields that examined barriers to activity participation and nonparticipation. The first of these studies, on attitudes toward participation in the arts, informed the creation of the scale used in the present study to measure perceptions and attitudes toward school music.

Activity Participation and Nonparticipation in Related Fields

Harland and Kinder (1995) conducted a large, qualitative study on national arts participation among people ages 14 to 24 years in Britain. Using data from 704 interviews, the authors created a typology of attitudes that either facilitated or hindered arts participation. Twelve positive attitudes emerged as motivations for arts participation at varying levels of engagement. Eight "attitudinal barriers" (p. 25) reflected a "vocabulary of non-motivation" (p. 25) based on perceptions and attitudes toward the arts (e.g., "Singing or playing an instrument at school is boring"). Three non-attitudinal barriers represented environmental factors that inhibited arts participation. These attitudes and an example of each, organized by typology, are displayed in Table 3. The definition of arts in the study was intentionally broad, encompassing "high arts" (e.g., opera, theatre, sculpture, literature) to "common cultural" (p. 17) forms (e.g., scratching, graffiti, fashion), traditional and contemporary genres, and arts and culture within and beyond the Western European tradition.

Table 3

Summary of Three Typologies of Attitudes Toward the Arts and Examples

Attitude Typologies	Example Statements
Positive Attitudes (Motivations)	*I participate in the arts because...*
General or unspecified motive	*...I get enjoyment, fun out of them.*
Ability or achievement-oriented motive	*...I want to be the best, to win.*
Task-oriented motive	*...I want to improve, acquire new skills.*
Socializing motive	*...of its social benefits, making friends.*
Status-seeking motive	*...it helps my image.*
Social pressure motive	*...I am pleasing [significant others].*
Physiological or therapeutic motive	*...it's about relaxation, feeling a buzz.*
Self-identity motive	*... it's an important means of self-expression.*
Relevance or comfortability motive	*...it's something I can relate to.*
Intrinsic or aesthetic motive	*...of an appreciation of the qualities of the art form.*
Situation-specific motive	*...I have a high regard for working with my teacher.*
Material or monetary motive	*...of financial reward.*
Negative attitudes (Barriers)	*For me, arts involvement is hindered by my…*
General or unspecified barrier	*...view that it's boring.*
Talent barrier	*...perceived lack of ability.*
Irrelevance or discomfortability barrier	*...lack of comfort with the art form's content and context.*
Non-stimulus barrier (Lacks physiological/therapeutic value)	*...failure to be engaged/excited.*
Negative affect barrier	*...sense of unease while attempting it.*
Situation-specific barrier	*...dislike of the teacher/context.*
Group image barrier	*...peers/family norms.*
Self-image barrier	*...sense of myself as not an "artsy" person/ I'm more into sports.*
Non-attitudinal barriers	*For me, arts participation is hindered by…*

Lack of provision and opportunities	*...lack of opportunities*
Lack of time	*...[spare] time, other commitments*
Lack of money	*...insufficient money and lack of equipment.*

Note: Attitudes toward arts participation from Harland & Kinder (1995).

Harland and Kinder (1995) related the 12 positive attitude typologies to motivation levels defined by varying degrees of commitment to, or engagement with, the arts. Three attitudes provided rare or non-relevant motivation for arts participation. Achievement-oriented (i.e., competitive), status-seeking, and monetary motives were "rarely evident" (p. 19) in the sample. Attitudes considered low motivations for arts participation were general or unspecified motives expressed in non-specific language, such as "fun" or "enjoyable" (p.18), along with a social pressure motive indicating participation that pleased parents or teachers.

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Most of the positive attitude typologies motivated arts participation at moderate or high levels. Motives regarding the benefits of socialization, ability to relate to the art form, and situation-specific motives related to personal experiences, such as a respected teacher, motivated arts participation at moderate levels. High motivations for arts participation related to task-oriented, therapeutic, self-identity, and intrinsic motives. Task-oriented motives reflected the desire to improve personal skills, while a physiological or therapeutic motive referenced the positive affective states that

accompanied arts participation, such as relaxation or feeling "a buzz" (p. 20). Self-identity motives were those in which arts participation was a means of defining or expressing oneself and in which intrinsic or aesthetic motives reflected deep personal connections to the artistic qualities of the art form.

Harland and Kinder (1995) identified eight negative attitude typologies in which participants related judgments of arts involvement to personal identities. General or non-specific barriers referred to broad, negative descriptions of arts involvement, such as "boring" or "rubbish" (p. 25). For some respondents, perceptions of their lack of ability or other deficiency presented a talent barrier, while a lack of understanding of the artistic content or stereotypical views about who participated in certain art forms constituted irrelevance or discomfort. Non-stimulus barriers described individuals whose arts participation did not provide any therapeutic or physiological benefits. Those who found the act of participating in arts to be "embarrassing" (p. 27) experienced a negative affective barrier, and those who disliked a teacher or particular context encountered a situation-specific barrier. Self- and group-image barriers included incongruence of arts participation with self-perceptions or the social norms of family and peer groups. Three non-attitudinal barriers referenced deficiencies that prohibited arts participation: lack of provision or opportunities, lack of time, and lack of money. Surprisingly, references to a lack of money came from those who might be able to finance their arts involvement: middle class and above, over 21 years of age, or those with high educational attainment.

Harland and Kinder (1995) urged arts educators to focus on fostering the attitudes expressed by those respondents most engaged in the arts: task-oriented, therapeutic, self-expression, and intrinsic aesthetic motives. Because many of their respondents expressed

both positive and negative attitudes towards the arts, Harland and Kinder suggested the need to differentiate arts experiences to meet individual needs and attitudes. They concluded that positive attitudes were more likely to develop "when the exposure to an encouraging agent was sustained over a period of time" (p. 30).

Research with individuals who did not participate in activities of interest revealed a number of constraints perceived to obstruct their ability to join or continue an activity. Searle and Jackson (1985) examined 15 barriers among adults who wanted to participate in a new recreational activity but were unable to do so. The authors identified trends between groups regarding their experiences with these barriers that varied according to socioeconomic variables including age, sex, education, income, type and size of household, and length of residency. Work barriers were the most important, followed by lack of opportunity. While perceptions of economic barriers (e.g., admission fees or price of gasoline) varied by activity, the price of equipment was the most important. Barriers related to ability (e.g., physical ability, artistic or creative ability, and being physically unable) ranked at the bottom, indicating that these barriers had less impact on potential participants.

Searle and Jackson (1985) conducted cross-tabulations of subgroups with each possible response to the barrier statements, which revealed several significant associations. Age and income were most frequently associated with barrier perceptions (reporting barriers that obstructed participation), followed by type of household, sex, and education. All significant barriers had the strongest effects on those individuals who reported the least income with barrier perceptions decreasing or remaining steady as income increased. The results revealed significant negative relationships between

income and ten of the barrier statements, in which participants at lower income levels reported higher levels of constraint related to the lack of partner, cost of equipment, admission fees, shyness, price of gasoline, lack of transportation, site unknown, physical ability (lack of physical skill), artistic ability, and physically inability. Individuals from single-parent families were the most disadvantaged group in pursuing recreational activities, as they experienced the most constraints.

These results led Searle and Jackson (1985) to conclude that barriers were unequally distributed; female, low income, and elderly groups suffered the greatest barrier effects. The authors noted several conflicting results. Those who wanted to participate in a new activity but could not, were the least inhibited by obstacles, specifically young, well-educated, and financially secure individuals. Those with the lowest desire to begin new activities were also those who were the most inhibited by barriers, including single parents, the elderly, and those who were economically disadvantaged. Searle and Jackson suggested that, for these individuals, this lack of interest in new activities might actually be a resignation to their personal circumstances and disadvantage regarding recreational access. The authors also suggested that interactions between variables might compound individual experiences, such as the lack of income and education, which "appear[ed] to create circumstances which may enhance the severity of individual specific barriers to participation in recreation" (p. 238). They argued that the goal of making recreational activities accessible to all requires the unequal distribution of services and pricing for a more "multidimensional service" (p. 246).

Hultsman (1992) investigated the constraints experienced by early adolescents (i.e., grades 5 to 8) who did not participate in recreational activities at school or in the community. Participants ranked five constraints from a list of 14 that prevented them from joining an activity in which they were interested. They also ranked five constraints from a list of 15 for dropping out of an activity. The top constraints for not joining an activity related to cost, parents denying permission, transportation issues, and being too young to join. The top reasons for discontinuing an activity were cost, moving to a new location, lack of interest, activity no longer available, and conflict with the scheduled time. Among respondents, 80.5% indicated interest in at least one activity they had not joined and 63.4% of respondents reported discontinuing participation in at least one activity.

Hultsman (1992) found a number of significant differences in constraints based on age, grade level, gender, race/ethnicity and the socioeconomic status of the school environment the students attended (the proportion of students receiving free or reduced lunch). The results presented here focus on non-sports activities, including music, which were relevant to the present study. Regarding school, non-sports activities, sixth graders reported perceiving the location of the activity as a significantly greater barrier than those in other grades. With regard to joining community, non-sports activities, females experienced the barriers of belonging to other activities and peers' opinions significantly more than males, while students from low socioeconomic school environments reported parental permissions as a significantly greater constraint than students from other schools. The location of community, non-sports activities was significantly less a barrier for eighth grade students than for those in other grade levels.

When considering the significant differences regarding decisions to discontinue participation in school non-sports activities, eighth graders indicated lack of skills as a significantly greater barrier and parents as significantly less influential than students in other grades. In community, non-sports activities, females perceived the cost and the influence of friends to be significantly greater barriers than males, while males reported their dislike of the leader as a significantly greater barrier than girls. Lack of transportation and feeling too old were significantly more influential for sixth graders and students from middle-class school environments, respectively, than peers from other grades and students from other school types.

Hultsman (1992) concluded that adolescents' perceptions of constraints differ from those of adults. Moving to a new location, the influence of friends, and feeling too old were reasons for discontinuing an activity, while parental influences were more prominent when deciding to join an activity. Hultsman concluded that the loss of interest commonly given as the reason for not joining or for discontinuing an activity might be a symptom of changing patterns in activity preference that are part of the process of adolescent maturation.

The results of the studies in this section revealed motives and barriers to participation, both in terms of attitudes toward participation and external factors that influenced decisions not to participate. These studies suggested that constraints and attitudes might be specific to particular domains and that the influences on joining activities might differ from those required for sustained engagement. Searle and Jackson (1985) suggested that the interaction of different variables, such as income and education, might have an effect on the magnitude of barrier perception, a point for consideration in

the analysis for the present study. While Hultsman's (1992) work focused on the age group of focus in the present research, its inclusion of music with other non-sports activities makes it difficult to determine whether, or how, the results might apply to school music. In addition, these studies also informed the creation of new scale items to explore perceptions of constraints to school music for the survey in the present investigation. These items provided an opportunity to test the constraint negotiation theory and its potential application to school music participation.

Chapter Summary

In this chapter, the present researcher summarized literature related to participation and nonparticipation in school music program, as well as the expectancy-value and constraint negotiation theories in which this investigation was grounded. The research presented here suggests that school music programs do not currently serve all students. Costa-Giomi (2012) argued that the existing research in music education "supports the idea that music programmes attract children from a privileged population" (p. 346), whether these musical opportunities occur inside or outside of school. Despite the fact that the problem of nonparticipation has long been a subject of investigation, the research presented here suggests that little has changed. The population of students served by music education has remained relatively stable over the last several decades, and the existing model of performance-based ensemble music has remained relatively unchanged.

There are a variety of very personal and specific reasons why students choose to participate, discontinue, or choose not to participate in school music. The degree to which these reasons generalize to other students is debatable, and there is likely no single

"one size fits all" solution to nonparticipation. The studies summarized above suggest that a combination of musical and non-musical factors were likely related to the level of participation in school music. Given the large number of potential factors that influence decisions regarding the level of musical participation, the selection of theories that encompass many of these factors was important in focusing the present investigation. Both the expectancy-value and constraint negotiation theoretical frameworks related to choice behaviors, in which individuals select from the options they perceive to be available, seemed appropriate for exploring elective choice in school music.

Students have various objectives and goals for their musical participation, from recreational to professional aspirations. However, the narrow scope, specialized nature, and performance model of musical experiences provided in school music programs that are often focused primarily on Western classical music does not seem to connect to the majority of students in K-12 schools. However, because there has been little focus on students who choose not to participate in school music, it is uncertain what differences exist between participants and true nonparticipants who have never participated in elective school music. Therefore, this leaves many questions unanswered regarding the reasons these students do not participate, the barriers they perceive to their participation, and the kinds of musical experiences they desire. Researchers have proposed that school music needs to expand in non-traditional directions in order to engage new populations of students (Allsup, 2003; Green, 2002, 2008; Hebert, 2009; Jorgensen, 2003; Kratus, 2007; Reimer, 2003; Snead, 2010; Swanwick, 1999; D. A. Williams, 2007, 2011; D. B. Williams, 2007), but what is largely missing are the voices of the students themselves. The present study brings these voices to the conversation by drawing comparisons

between school music participants and nonparticipants regarding beliefs, values, and attitudes toward school music, as well as their experiences with constraints to participation. Chapter Three provides a detailed description of the methods and procedures used to explore these constructs in the present study.

CHAPTER THREE: METHOD

This chapter outlines the methods used to conduct the present study. A brief overview of mixed methods designs and their use in music education research provides a foundation for this mixed methods study. Next, an explanation of the sequential explanatory mixed methods design selected for this study and the paradigmatic stance of the researcher is presented. This is followed by descriptions of the sampling procedures, the research setting and the study participants, the instruments and materials used in data collection, and the procedures for executing the study. The analysis plan for the data collected to answer the quantitative, qualitative, and the mixed methods research questions will then be presented.

Overview of Mixed Methods Research

Mixed methods research designs rely on the strengths of both quantitative and qualitative methods to answer the research question(s) of interest and to lead to a better understanding of the phenomena studied (Creswell & Plano Clark, 2011; Greene, Caracelli, & Graham, 1989; Morgan, 1998). By combining quantitative and qualitative methods, the mixed methods researcher uses the strengths inherent in each design to offset the weaknesses in the other and to view the problem from multiple perspectives. Quantitative data are used to report the frequency or magnitude of behaviors and beliefs, while qualitative methods are used to understand the intentions and meanings that underlie them, using numbers and words respectively, to describe participants' experiences (Sandelowski, Voils, & Knafl, 2009; Yoshikawa, Weisner, Kalis, & Way, 2008).

Greene (2008) identified three "primary dimensions" (p. 14) that distinguish mixed methods research from approaches that use both quantitative and qualitative methods. These dimensions represent important decisions made by the researcher in the conceptualization and planning phases of mixed methods research that later govern the execution of the study. The first dimension is the degree to which the quantitative and qualitative methods are independent or interactive in the design and the point at which these methods are brought together, or mixed. The point at which the methods are integrated is of primary importance in mixed methods research and must occur in at least one phase of the design (Teddlie & Tashakkori, 2010). A second key feature of mixed methods research is the status of the methods, where priority is either placed on one method over the other, or the strands are considered equally important in the design. Finally, the timing of the two strands represents the third dimension of mixed methods research, which can be either concurrent, sequential, or a multiphase combination in which the timing for different strands varies in different phases of a study (Creswell & Plano Clark, 2011).

Mixed methods designs serve a variety of inquiry purposes connected to the motivation for the use of both quantitative and qualitative methods. The five purposes for mixing methods identified in theoretical and empirical literature are: triangulation, complementarity, development, initiation, and expansion (Caracelli & Greene, 1993; Green, 2008; Greene, et al., 1989). *Triangulation* serves the purpose of "convergence, corroboration, correspondence" (Greene et al., 1989, p. 259) in bringing together the results from different methods. *Complementarity* designs use different methods to examine "overlapping but distinct facets" (Caracelli & Greene, 1993, p. 196) of the same

phenomena, with one method used in "elaboration, enhancement, illustration, clarification" (Greene et al., 1989, p. 259) of the results from the other. Designs with the purpose of *development* use the results from one method to inform or develop the other method, as in sequential designs. The purpose of *initiation* is to discover "paradox and contradiction" (p. 259) by modifying the research questions or results from one method using the results or questions from the other. *Expansion* serves the purpose of increasing the breadth of the inquiry by using different methods to examine different components of the same phenomena.

Mixed methods research has been called the "third methodological community" (Teddlie & Tashakkori, 2010, p. 11) for embracing "methodological eclecticism" (p. 9) in selecting the methods that will best answer the research question(s) that are central to an inquiry. This approach rejects the incommensurability thesis, the belief that research methods cannot be mixed due to the fundamental differences between their foundational paradigms (Morgan, 2007; Teddlie & Tashakkori, 2010). Muncey (2009) suggested that, rather than perpetuating the "false dichotomy of objective/subjective" (p. 27) by viewing quantitative and qualitative methods of inquiry as diametrically opposed, the methods might be viewed on a continuum and be appreciated for their ability to answer different kinds of questions.

Mixed Methods Research in Music Education

Researchers in music education have used mixed methods designs to explore various phenomena of interest using both quantitative and qualitative methods in the same study. Such researchers have used mixed methods designs to explore instrumental music teaching in urban settings (Fitzpatrick, 2011); recruitment, retention, and

participation of African American students in high school choral ensembles (Horne, 2007); and middle school students' flow experiences in band ensemble classrooms (Clementson, 2014). Similar to the present study, other studies have utilized a two-phase, sequential approach to examine student-centered instructional pedagogy among middle school band directors (Bazan, 2011) and high school band directors' and students' perceptions of verbal and non-verbal teaching behaviors (Whitaker, 2011). Gerrity, Hourigan, and Horton's (2013) investigation of music learning among children with special needs used a sequential explanatory design, the design also used in the present research. While all of these sequential explanatory designs used the qualitative component to build a more complete and detailed understanding of the quantitative results, the extent to which these authors converged the results from each strand and truly mixed the methods varied widely.

Mixed Methods Research Design

The present study was a two-phase explanatory sequential (QUAN → qual) mixed methods design (Creswell & Plano Clark, 2011) in which the first, quantitative phase was followed by a second, qualitative phase that served to explain the quantitative results (Figure 6). In the quantitative phase of the study, students responded to a survey designed by the researcher to compare the perceptions and experiences of school music participants to music nonparticipants. The researcher created and adapted survey items to explore participation and nonparticipation in music inside and outside of school at all levels (i.e., elementary, middle, and high school), beliefs and values for music inside and outside of school, and factors and barriers perceived to restrict or obstruct participation in

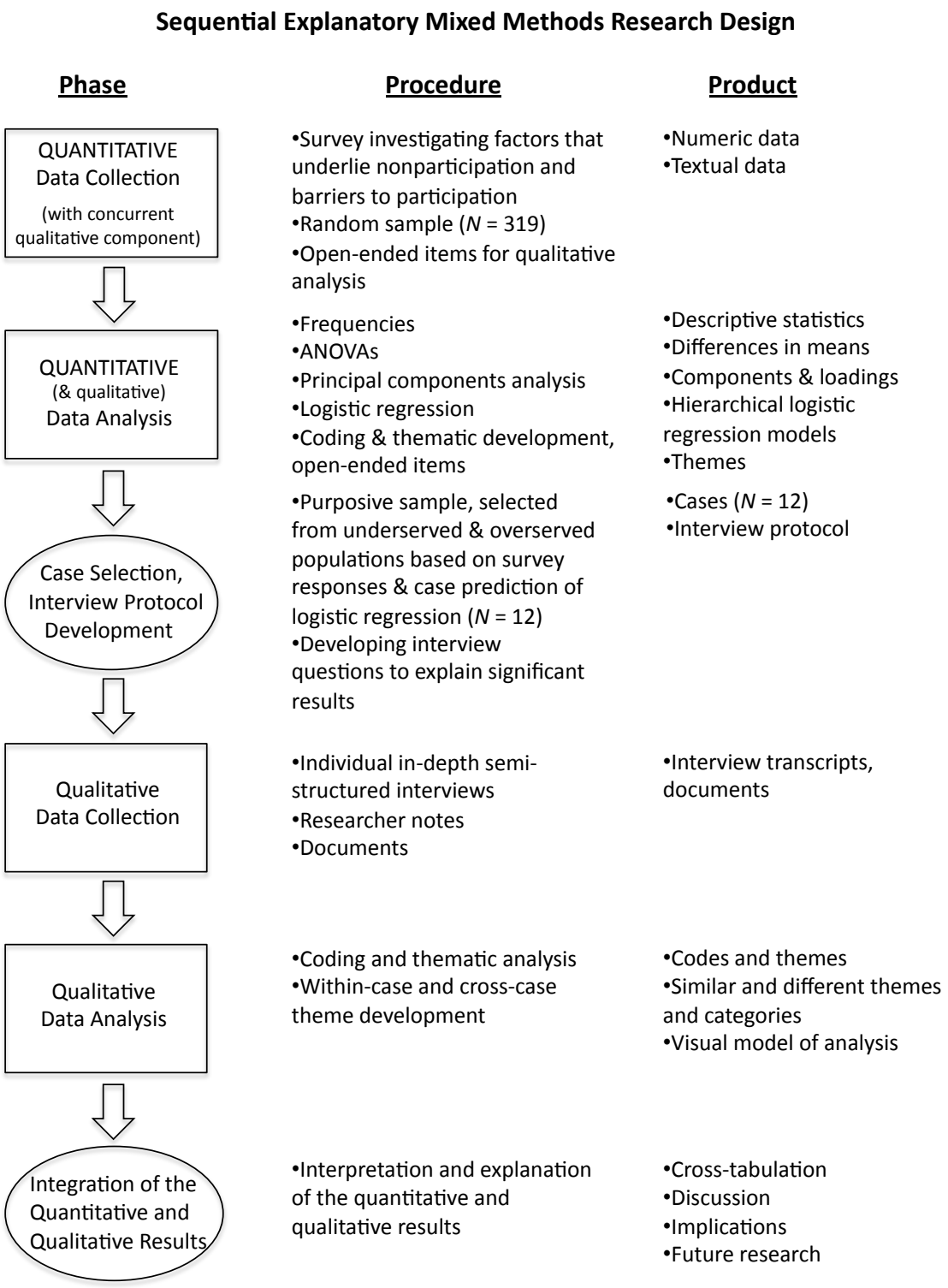

Figure 6. Sequential explanatory mixed methods design (QUAN → qual) for the present investigation.

school music. The researcher used the survey data to test the hierarchical model of leisure constraints (Crawford, Jackson, & Godbey, 1991) and constraint negotiation theory (Jackson, Crawford, & Godbey, 1993). As an initial investigation focused on increasing participation in school music programs, the survey also included one concurrent qualitative component to solicit suggestions for possible revisions to current school music programs that might encourage more students to participate. The inclusion of these two open-ended items allowed the researcher to gather more information from the survey participants than would have been possible through the interviews alone. The interviews in the qualitative phase of the study were used to explain the quantitative results, providing a more detailed understanding of student nonparticipation in school music with a focus on student populations currently underserved by such programs. These interviews focused on exploring how school music nonparticipants' perceptions and experiences with various barriers influenced their discontinuation or nonparticipation with school music.

The sequential explanatory mixed methods design used in this study served the purpose of development (Greene et al., 1989), since the results from the quantitative phase informed the data collection and sampling of the qualitative phase (Greene et al., 1989; Morgan, 1998). The quantitative methods provided the theoretical drive for this study, with the qualitative methods used to assist in building a greater understanding the quantitative results (Morse, 1991). For the purpose of the present study, the quantitative approach provided a broad view of the factors that underlie students' decisions not to participate in secondary school music and the barriers that may hinder their participation,

while the qualitative approach provided a deeper understanding of the perceptions and experiences of students who do not participate in music at school.

Pragmatic Paradigmatic Stance

Greene (2007) argued for approaches in social science research that embrace multiple perspectives:

> A mixed methods way of thinking is an orientation toward social inquiry that actively invites us to participate in dialogue about multiple ways of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is important to be valued and cherished. (p. 20)

The acceptance and value of multiple perspectives and realities provide the foundation for the pragmatic paradigmatic stance from which the researcher operates in the present study. For pragmatists, research is centered on a problem that is examined using multiple methods, resulting in multiple forms of data that are used to answer the question(s) of interest (Creswell & Plano Clark, 2011; Evans, Coon, & Ume, 2011; Teddlie & Tashakkori, 2010). Pragmatists are primarily concerned with the application of knowledge in solving real world problems, reflecting a belief in the value of the *utility* of knowledge over the generation of new knowledge for its own sake (Creswell & Plano Clark, 2011). Pragmatists embrace the mixed methods way of thinking by valuing subjective and objective knowledge, as well as inductive and deductive reasoning. In addition, pragmatists acknowledge that the nature of truth in the human world consists of multiple realities, a metaphysical position termed "ontological pluaralism" by Johnson and Gray (2010, p. 72) in which mixed methods researchers seek to make connections between the subjective, intersubjective, and objective realities of human experience.

Morgan (2007) outlined new ways to approach methodological concerns in the social sciences from a pragmatic paradigmatic stance that moved away from quantitative/qualitative dualism. He used the term *abductive* to refer to an approach to reasoning that moves between "induction and deduction – first converting observations into theories and then assessing these theories through action" (p. 71). This approach is common in sequential designs in which researchers use quantitative and qualitative to move between data and theory. The *intersubjective* approach uses both the objective and subjective research methods, highlighting the importance of building shared meaning. For Morgan, intersubjectivity was an important element of social life for pragmatists, with both contention and consensus arising out of social processes. In drawing inferences from data, Morgan suggested that the practical use of knowledge was a greater concern than its generalizability to other contexts, borrowing the idea of *transferability* from Lincoln and Guba (1985), a perspective that considers how the results from a specific context might be transferable, rather than generalizable, to another setting.

The researcher in the present study approached the investigation from a pragmatic paradigmatic orientation in which the primary concern focused on finding solutions to the problem of music nonparticipation among secondary students. In undertaking this study, the researcher began with questions regarding the reasons that some secondary students choose not to participate in school music programs and progressed to selecting the methods that would best answer these questions. The researcher took an inductive approach to the research design by exploring nonparticipation through the theoretical lenses of the expectancy-value and constraint negotiation theories. The researcher then returned to selected participants to collect additional, qualitative data to better understand

how the theories operated in their lived experiences. The researcher took an abductive approach to the qualitative analysis, working inductively and deductively between the data and theories to determine whether the expectancy-value or constraint negotiation theories explained nonparticipation in school music. The researcher accepted the concept of intersubjectivity and the existence of single and multiple realities, moving between objective and subjective frames of reference. The goal of this study was to build an understanding of music nonparticipation through the individual experiences of students who encountered a variety of different personal, social, and environmental factors that influenced their experiences and formed their realities. The researcher considered the extent to which the findings of this research might be transferable to other school contexts and its implications for music education.

The paradigmatic stance of the researcher is also a consideration in reporting mixed methods studies (O'Cathain, 2009). Because quantitative and qualitative methods have very different standards of presenting and reporting research, mixed methods researchers must choose the style and voice in which they will write their reports. Sandelowski (2003) suggested that researchers write reports in the voice and style of the dominant method, which for this study would have required third-person and separation of the results and discussion. O'Cathain (2009) suggested that these choices arise out of the paradigm from which the researcher operates. For researchers taking a pragmatic approach, this means writing in the style and voice appropriate for each method. The researcher decided to write the majority of the report in third person, reflecting the dominant method of the study, but to write the qualitative analyses and results sections

(i.e., "qualitative methods" in this chapter and Chapter Four, and all of Chapter Five) in first person.

Site Selection and Permissions

For the purposes of confidentiality, the names of the district and schools are pseudonyms. To facilitate the inclusion of perspectives of students from populations currently underserved by school music programs, the researcher considered school districts located in three Midwestern cities with diverse populations as possible sites for the present study. The National Center for Education Statistics demographic statistics provided guidelines for the selection of a school in which Hispanic students and those from low socioeconomic backgrounds, populations previously identified as underserved (Elpus & Abril, 2011), were adequately represented in the overall school population. The most recent reports, using data from 2011, showed that the overall national school population was 52% White and 24% Hispanic (U.S. Department of Education, 2014) with 21% of students living in poverty (U.S. Department of Education, 2013b). Based on these figures, the criteria used to select the final research site involved finding school districts in which no more than 60% of the students were White, at least 25% of the students were Hispanic, and approximately 20% of the students received free and reduced school lunch. At the school level, student eligibility for free and reduced school lunch is often used as an indicator of socioeconomic disadvantage. The Tremont School District met all of these requirements: 53% of students were Caucasian, 30.2% were Hispanic, and 62.6% qualified for free or reduced school lunch across the district.

After identifying potential school districts, the researcher examined individual high schools within each district. An additional selection criterion in determining the

research site was the presence of a second high school in the same district that met the population guidelines previously outlined. Because the researcher created the survey instrument for the present study, a pilot test with a similar population of students was necessary, and this second school provided a site for the pilot component of this investigation.

Enrollment data for potential research sites on the school district websites aided in the selection of a school district with two high schools in which to conduct the pilot and main studies. The researcher wanted the pilot and main study sites to be located in the same school district and community so that students would have had similar opportunities and experiences with music in school and in the community. Based on demographic information from the 2013-2014 school year, the school selected as the research site met all of the selection criteria. Students at the school selected as the main study site were 45.9% White, 35.2% Hispanic, and 59.8% received free or reduced lunch.

Based on the 2013-2014 demographic information, students at the pilot school were 76.7% White, 30.8% Hispanic, and 36.9% received free or reduced lunch. The principal at the pilot school confirmed that students reported both their race and Hispanic ethnicity separately, and that the majority of Hispanic students self-indentified their race as White (personal communication, October 6, 2015). However, due to the nature of the required school report on race and ethnicity, an exact percentage of White, non-Hispanic students was not readily available. The researcher calculated the percentages of students reported in each of the racial categories, confirming that the total equaled 100%. This suggested that, if even half of the Hispanic students also identified their race as White, the total percentage of White students was approximately 61%. Because the school met

the other selection criteria, and it was likely that the proportion of White students met the criterion for race/ethnicity, the researcher decided to select this school as the pilot site.

One of the challenges of studying this population (e.g., students who do not participate in the school music program) is that these individuals are not easily accessible. Gatekeepers (Creswell, 1998) at the district and building levels provided valuable assistance to the researcher in coordinating the activities of the study and facilitating access to the potential study participants. The researcher contacted the Tremont School District superintendent to inquire about conducting the research in the selected schools and upon receipt of a favorable response, completed the application for research required by school district policy. In the email notification of the school district's approval for the study, the district superintendent introduced the researcher to a staff member who would serve as the primary contact at the district level. This contact person introduced the researcher to administrators at the pilot and research sites with whom the researcher coordinated the research activities. The high school administrators, in turn, introduced the researcher to staff members and faculty at their schools who provided assistance throughout the research process. The school district and IRB approvals for the study are included in Appendices A and B.

Description of the School District, Pilot, and Research Sites

The study took place in a diverse, Midwestern high school in a suburban school district. The Tremont Public School District was located in a city of approximately 83,000 people with 18 pre- and elementary schools, three middle schools, and three high schools serving nearly 14,000 students. The student population of the district during 2013-2014 was 53% Caucasian, 30.2% Hispanic, 5.4% African American, 3.7% Native

American, 3.5% Asian American, 3.2% multi-racial, and .5% Pacific Islander. The district's students speak 29 languages other than English with 18.5% of all students identified as English Language Learners. Overall, 62.6% of the total student population qualified for free or reduced school lunch and 13% of the students received special education services. The district also reports the student mobility rate, which was 17.3% district-wide.

The music program in the Tremont Public School District provided musical experiences for students in grades PK-12. All elementary school students received general music instruction with a music specialist twice each week for 30 minutes. Some elementary schools offered additional choir, world drum, or steel drum ensemble opportunities that met primarily outside of the school day. Students had the option of beginning string instruments in the fourth grade and wind and percussion instruments in the fifth grade.

At the middle school level, comprised of grades six through eight, all music courses were elective. Students could elect to enroll in choir, band, and/or orchestra, or an exploratory course in music. The exploratory course, middle school general music, rotated between four main areas of focus: piano, guitar, world drumming, and theory/composition. In this course, students learned to play instruments and worked with computers and MIDI keyboards, providing a piano-like interface for input. The course was a semester in length and students could enroll in the course multiple times during their middle school years. Middle school students also had the opportunity to participate in guitar club, beginning band club, jazz choir, or jazz band after school. High school music courses were also elective, with two credits, or courses, of fine arts required for

graduation selected from two different areas: music, visual arts, dance, theater/drama, or humanities. Music course offerings at the high school level included choir, band, orchestra, music theory (offered at two levels), jazz choir, jazz band, jazz improvisation, and history of popular music.

The researcher pilot tested the survey at Shady Hills High School, where the student population was 76.7% Caucasian, 8.7% Native American, 7.2% African American, 5.6% Asian American, 1.1% Hawaiian/Pacific Islander, and .7% multi-racial. School officials reported demographic data for race (the preceding list of percentages) and Hispanic ethnicity as separate measures; 30.8% of the students identified as Hispanic. Of the total student population, 63% received free or reduced school lunch, and 15.5% were English Language Learners. The school had a student mobility rate of 19.8%. Students who enrolled in music courses represented 17.3% of the school's population. At the time of the pilot test, the total student enrollment at Shady Hills High School was 1,173 students with 250 students enrolled in music and 923 who were not. Among the music students, 19.9% enrolled in more than one music course. The music program included performing ensembles, music theory, and a history of popular music course. The school's concert ensemble program consisted of two concert bands, one jazz band, two orchestral ensembles, and five choirs.

Oak Valley High School served as the research site for this study. The student population was 42.3% Caucasian, 38.4% Hispanic, 7.6% African American, 7% Asian American, 3.4% Native American, 1.2% multi-racial, and .1% Hawaiian/Pacific Islander. Overall, 59.8% of the student population received free or reduced school lunch, and 19.6% were English Language Learners. The school had a student mobility rate of

25.7%. Students enrolled in music courses represented 15.2% of the student body. At the time of the main study, the total student enrollment at Oak Valley High School was 1,421 students with 216 students enrolled in music and 1,205 who were not. Among the music students, 30.3% enrolled in more than one music course.

The music program at Oak Valley High School consisted of performing ensembles, music theory, and a history of popular music course. The school's music program consisted of two concert bands, two orchestras, and four choirs that met during the school day. There were two jazz bands that rehearsed before school, with one group rehearsing daily and the other rehearsing three days each week. The band program also included a marching band that constituted the fall band curriculum, and, as such, membership was mandatory for all students enrolled in the concert band program. The marching band began rehearsals in the summer and once school started, rehearsed during the scheduled class time during the school day as well as every morning before school. At the time of the study, the music and theater departments were collaborating to produce the school musical.

Sampling Rationale

Sample sizes for mixed methods research vary based on the type of design employed. In a sequential explanatory design, a large, quantitative sample in the first phase is followed by a smaller qualitative sample in the second phase, because the intention of the qualitative data analysis is to further explain the quantitative results, rather than to merge or compare the results from each strand (Creswell & Plano-Clark, 2011; Morgan, 1998; Greene et al., 1989). In the present study, a sample of 319 students,

167 enrolled in school music and 152 who were not, participated in the first, quantitative phase of the study in which participants completed a survey.

The researcher purposively selected participants for the second, qualitative phase from among those who completed the survey (Morse, 1991). Qualitative sampling relies on the concept of saturation, the point at which new information no longer emerges from the data. Guest, Bunce, and Johnson (2006) found that saturation occurred in the first 12 in-depth interviews. For phenomenological studies, in which the focus is on the lived experiences of individuals who have experienced the same phenomenon, Creswell (1998) suggested up to 10 interviews. Both of these recommendations suggested that the depth and quality of information collected through the interviews were of primary importance. Based on these recommendations, the qualitative sample for the present study consisted of 12 participants for the interviews.

Details regarding the sampling, as well as the other methods used for each phase of the present study are described in the two sections that follow. For the first, quantitative, phase of the study, the survey development, validity and reliability, sampling procedures, pilot study, data collection, and data analysis are described in detail. This is followed by the procedures for the second, qualitative, phase of the research, including the sampling procedures, data collection, data analysis, the role of the researcher, and establishing trustworthiness.

Quantitative Procedures

Survey Development

Due to the limited research on school music nonparticipants, a standardized, tested instrument was not available. The researcher developed a survey instrument

incorporating existing measures, when available; creating new measures grounded in research literature; and constructing new items to generate data that would effectively answer the research questions for the present study. Toward this end, the researcher reviewed measures used in research in the fields of music education (Corenblum & Marshall, 1998; Costa-Giomi & Chappell, 2007; Elpus & Abril, 2011; Fitzpatrick, 2006; Kinney, 2008, 2010; Klinedinst, 1991; Mawbey, 1973; McCarthy, 1980; McPherson & O'Neill, 2010; McPherson & Hendricks, 2010; Stewart, 1991; Wolfle, 1969), leisure studies (Crawford et al., 1991; Harland & Kinder, 1995; Hultsman, 1992; Jackson et al., 1993; Searle & Jackson, 1985), and educational psychology (Eccles et al., 1983; Eccles et al., 2005; Eccles et al., 1993; Eccles et al., 1998). The purpose of the present study and the research questions guided the selection of variables and associated response scales, each of which is described in detail in the following pages. The researcher pilot tested the survey for validity and reliability with a sample of students similar in demographic composition to those at the research site in a different high school located in the same school district.

In designing the questionnaire for the present investigation, the researcher used *Qualtrics*, a free, online survey tool. Endorsed by the University of Minnesota for meeting strict information security requirements, *Qualtrics* allowed the researcher to make use of skip logic and conditional branching in the survey design. Because the survey explored the perceptions and experiences of two contrasting groups of diverse respondents, music participants and nonparticipants who were native English speakers and English language learners, the researcher used skip logic and conditional branching in some cases to direct respondents to questions specific to their experiences. In the

narrative that follows regarding the description of the variables investigated and the scales used in this survey, instances in which the researcher used skip logic and conditional branching to guide respondents to specific survey items are explained.

Theoretical frameworks. The expectancy-value and constraint negotiation theoretical frameworks used in this study were covered in detail in Chapter Two. The researcher used the Ability/Expectancy, Perceived Task Difficulty, and Perceived Task Value scales (Eccles et al., 1983; Eccles et al., 2005; Eccles et al., 1993; Eccles et al., 1998) in the survey to measure perceptions of musical ability, perceptions of musical difficulty, and values for music through an expectancy-value theoretical lens. The researcher changed the language from "math" in the published scales (Eccles et al., 2005) and "instrumental music" as previously used (Eccles et al., 1993, Eccles et al., 1998) to "music" as a broader conception of courses available to high school students that included instrumental music, vocal music, music appreciation, and music theory courses. As described in Chapter Two, Eccles and her colleagues used the scales to measure perceptions of abilities and values for various school subjects, by substituting various activity domains (i.e., math, reading, sports, instrumental music) in the wording of the scales. This practice supported the changes made to the scales for the present study.

The researcher also explored constraint negotiation theory (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993) as a theoretical framework for explaining participation and nonparticipation in school music. As the scales for the measuring perceptions of constraint in the studies described in Chapter Two were domain-specific, the researcher created constraint items specific to school music. These

items measured attitudinal factors and barriers related to school music at each of the three levels proposed in the hierarchical model: intrapersonal, interpersonal, and structural.

The researcher used the data from these scales to compare responses between school music participants and nonparticipants and to determine whether perceptions of musical ability, associated musical difficulty, and values for school music might have a direct effect on participation in the school music program. The researcher also adapted the Perceived Task Values scales to measure values for music outside of school to compare participants and nonparticipants, as well as to compare school music nonparticipants who were involved with music outside of school with those who were not. The constraint negotiation theory was previously untested in school music participation, and this study was an initial investigation to determine whether students' perceptions of constraints had a direct effect on their participation in the school music program.

Demographic characteristics. The researcher collected demographic data using survey items taken from the National Center for Educational Statistics' Educational Longitudinal Study (ELS) of 2002. The inclusion of demographic items from this survey allowed for comparison of the research site for the present study to the most recent national demographic study of music participants and populations identified as underserved by secondary school music programs (Elpus & Abril, 2011). The researcher selected the demographic variables for this study based on their significance in previous research and their relevance to the present study. The variables included sex (Elpus & Abril, 2011; Kinney, 2010; McCarthy, 1980; Stewart, 1991), academic achievement (Elpus & Abril, 2011; Kinney, 2010; Klinedinst, 1991; Mawbey, 1973; McCarthy, 1980;

Stewart, 1991;), race (Elpus & Abril, 2011), native language (Elpus & Abril, 2011), parental structure (Kinney, 2010), parental educational attainment (Elpus & Abril, 2011), and socioeconomic status (Elpus & Abril, 2011; Kinney, 2010; Klinedinst, 1991; McCarthy, 1980; Stewart, 1991). Membership in the free and reduced school lunch program, based on family income guidelines and used by schools as an indicator of socioeconomic disadvantage, served as the measure of socioeconomic status as it has in other studies (Costa-Giomi & Chappell, 2007; Fitzpatrick, 2006; Kinney, 2008).

Survey participants who indicated English as their native language answered 12 items and were directed by skip logic to the next section of the survey. Conditional branching took students who indicated native languages other than English to five items asking about their native language and frequency of use, the number of years they had enrolled in courses for English language learners, and their ability to speak and understand spoken English. The items in this section of the survey primarily consisted of forced-choice items with a few open-ended items (e.g., native language, years enrolled in English Language Learners courses).

Perceptions and attitudes toward school music. The researcher based the creation of items regarding student attitudes and perceptions regarding school music on research by Corenblum and Marshall (1998) and Harland and Kinder (1995) and suggested by task importance and values in Eccles et al. (2005). These studies were described in detail in Chapter Two. Corenblum and Marshall investigated students' intentions to continue instrumental music in high school, including students' perceptions of their school music program and the level of support provided by their parents and music teachers. In their qualitative study, Harland and Kinder classified attitudes towards

arts participation into three categories that either facilitated or inhibited participation in the arts: motivations, barriers, or non-attitudinal (i.e., environmental) barriers.

The Perceptions and Attitudes Toward School Music scale contained 14 items, each of which was measured on the same 7-point Likert-type scale (1 = "strongly disagree;" 7 = "strongly agree"). Five of the items measured attitudes about the school music program (e.g., "Our high school has a good music program") and one item explored perceptions concerning the population of students served by the school music program (e.g., "Our school district music program provides opportunities for everyone to make music"). Three items measured perceptions of parental support of musical involvement inside and outside of school and value for music (e.g. "My parents or guardians encourage me to be involved with music in school") and two items measured perceptions of peer support for involvement in music inside and outside of school. Three items measured perceptions of music teacher support at the elementary, middle, and high school levels (e.g., "My elementary music teacher encouraged me to try harder").

Involvement in music. The researcher designed survey items to determine the level of student involvement in music inside and outside of school. The researcher included items exploring students' musical involvement outside of school to determine whether students who did not participate in music at school did so outside of school. Conditional branching based on the response to the first question "Are you currently enrolled in any music classes at school?" directed respondents to a question regarding current music course enrollment (for those who responded "yes") or on to the next question (for those who responded "no"). All survey participants except those who indicated a grade level of "Freshman (9^{th} Grade)" answered a question concerning

previous high school music enrollment. The researcher provided a list of course enrollment choices for these items based on the school district's course book.

Respondents answered two items indicating music course enrollment during elementary and middle school. The researcher again based the lists of possible responses on those courses offered by the school district and confirmed by the Tremont School District's arts program coordinator. There were a total number of five closed questions in this section, and respondents could choose multiple responses for each of these questions. Music participants responded to the open-ended item "How many hours each week do you spend participating in music at school?" and nonparticipants answered the closed item "Do you participate in school music in any way?" The researcher provided a text box as an open-ended means of explaining a "yes" response so that survey participants could describe their experiences.

Students responded to the question, "Have you ever learned to play an instrument or sing at school with a music teacher (during the school day, before school, or after school)?" Skip logic took those who answered, "No" to an open-ended item at the end of this section (e.g., "I decided not to play an instrument or sing at school because..."). Conditional branching directed those who answered, "Yes" to three forced-choice questions. For the question "What instrument(s) have you learned to play at school with a music teacher (during the school day, before school, or after school)?," students selected choices from a list of standard wind, percussion, and string instruments that included voice, piano, and a space for respondents to write in any other instruments not included in the list. Students then answered two questions "What grade were you in when you started playing this instrument or singing at school?" and "What grade were

you in when you stopped playing this instrument or singing at school?" by choosing from a list of grade levels from "Before Kindergarten" to "12." For the item inquiring about the grade at which students stopped playing or singing, the choices also included "I still sing/play at school" and "I still sing/play, but not at school."

The next three items of the survey were open-ended and designed by the researcher to explore motivations for beginning music at school (e.g., "I decided to start playing an instrument or singing at school because…"), discontinuing involvement in school music (e.g., "I decided to stop playing an instrument or singing at school because…"), or choosing not to study music at school (e.g., "I decided not to play an instrument or sing at school because…"). Conditional branching directed respondents to the appropriate open-ended items based on their previous responses.

The researcher also asked survey participants about their pursuit of music outside of school, "Have you ever learned to play an instrument or sing outside of school (at home, church, a music store, with friends, or somewhere else)?" Skip logic took those who answered, "No" to a forced-choice item (e.g., "What musical activities do you participate in outside of school?"). Conditional branching directed those who answered, "Yes" to three forced-choice questions. For the question "What instrument(s) have you learned to play outside of school (at home, church, a music store, with friends, or somewhere else)?," students selected choices from a list of standard wind, percussion, and string instruments that included voice and a space for respondents to write in any other instruments not included in the list. Again, students answered two additional forced-choice questions, "What grade were you in when you started playing this instrument or singing at school?" and "What grade were you in when you stopped

playing this instrument or singing at school?" by choosing from a list of grade levels (e.g., "Before Kindergarten"; "12"). For the item inquiring about the grade at which students stopped playing or singing, the choices also included "I still sing/play."

All students answered the question, "What musical activities do you participate in outside of school?" The researcher created the responses for this question, including a wide variety of musical activities (e.g., individual and group, vocal and instrumental) in various styles (e.g., popular and classical styles) and modes of music making (e.g., creating and performing). The goal of providing this list was to encourage students to think broadly about their potential musical activities outside of school. Students could indicate no musical involvement outside of school, choose multiple responses, or write in any musical activities in which they participated that were not included on the list. Respondents who wrote in answers to this item were encouraged to include the style(s) of music they created or performed in these musical activities.

Values for music inside and outside of school. This section of the survey used the Perceived Task Value scales from Eccles et al. (2005) to collect data regarding perceptions of the value, importance, and utility of music, both inside and outside of school. As described in Chapter Two, the authors confirmed face validity, discriminant validity (through factor analysis), and predictive validity (related to other achievement outcomes) for these scales. Eccles et al. reported the Cronbach's alpha coefficients for each of the subscales as .76 for Intrinsic Interest Value, .70 for Attainment Value/Importance, and .60 for Extrinsic Utility Value. While the Cronbach's alpha for the Extrinsic Utility Value subscale did not meet the .70 threshold for reliability (Nunnaly, 1978), Eccles et al. (1993) reported reliability for the entire Perceived Task

Value scale as .82. In addition, Eccles et al. reported that subjective task values related most strongly to course enrollment when differences existed in association between achievement and enrollment decisions. The researcher in the present study decided to use all three of the subscales within the Perceived Task Values scale to discover whether values for music could predict musical participation when other variables, such as constraints, were present in the model. In addition, the researcher wanted to compare values for interest, importance, and usefulness for music inside and outside of school between both school music participants and nonparticipants.

In the present study, the researcher used pairs of items to compare perceptions of value, importance, and utility for music inside and outside of school using the same 7-point Likert-type scale. An example of a pair of items, comparing intrinsic interest value, was: "At school, how much do you like learning music?" and "Outside of school, how much do you like learning music?" Survey participants responded to three unpaired items to explore perceptions of the utility of music in general (e.g., "How useful is learning music for your daily life outside school?" In the present study, the researcher used seven of the eight items from the Perceived Task Values scale (Eccles et al., 2005) and included two items taken from McPherson and O'Neill (2010). One of the items from McPherson and O'Neill explored the extrinsic utility of music, "How useful is music compared to your other activities?" and the second item focused on the importance of music. The researcher used the importance item to compare the importance of learning music inside and outside of school, "How important is it to learn music in school?" and "How important is it to learn music outside of school?" Students responded to all 15 items in this section of the survey using a 7-point Likert-type scale for which the

anchor terms varied slightly to match the wording of the item (e.g., 1 = "Not very much" and 7 = "Very much"; 1 = "Not at all important" and 7 = "Very important").

Musical ability self-perception and task difficulty. As mentioned in the previous section, Eccles et al. (1993, 1998) used the ability self-perception scale in research with children and adolescents in school subjects including instrumental music. Like the scales for subjective task values, those for ability self-perception and task difficulty were domain-specific and were used to investigate achievement and to predict course enrollment. Eccles et al. (2005) reported that ability self-perceptions related most strongly to achievement in a given discipline.

The present researcher used the Ability/Expectancy and Perceived Task Difficulty scales from Eccles et al. (2005) to collect data regarding study participants' perceptions of musical ability and task difficulty. The authors reported the Cronbach's alpha for these scales as .92 for ability/expectancy and .80 for perceived task difficulty and also confirmed face validity, discriminant validity, and predictive validity as previously described. The Perceived Task Difficulty scale consisted of two subscales, measuring task difficulty and required effort. In the present study, the researcher decided to use only the Task Difficulty scale, determining that the Required Effort scale items were more appropriate for students participating in school music than for the nonparticipant population on which this study focused. The items regarding required effort focused on the amount of effort students believed to be required to get good grades in music and to compare the effort required for musical achievement to that of other subjects. For example, the question: "How hard do you have to study for music tests to get a good grade?" would be difficult for a student who did not participate in the school music

program to answer meaningfully. The questions regarding task difficulty, however, explored perceptions of the difficulty of musical tasks that school music nonparticipants could relate to their previous musical experiences. For example, the question, "In general, how hard is music for you?" could be answered by school music nonparticipants, and could be used to reflect upon their perceptions of previous musical participation in school when phrased in the past tense.

The original scale for self-perceived ability contained five items regarding individual perceptions of musical skill and expectations for success in music and three items for task difficulty. The researcher included all but one of these items on the survey, choosing not to use the ability self-perception item: "How have you been doing in music this school year?" because it was not applicable to students who were not currently participating in school music. All survey respondents answered one item for each scale (i.e., self-perceived ability: "How good are you at music?"; task difficulty: "How hard is music for you?"). Conditional branching then took students to five questions addressing perceptions regarding the current music class (i.e., items from the original scale) or the last music class taken in school (i.e., items created by the researcher based on the wording of the original questions). A representative sample of these items included: "How well do you think you will you do in music this year?" for respondents enrolled in music courses at school and "How well do you think you did in your last music class?" for those not enrolled in school music courses. There were seven items in this section to which survey participants responded on a 7-point Likert-type scale. As described previously for the items measuring values for music inside and outside of school, the

anchors for each of these scales varied slightly to appropriately match the wording of the individual items.

Depending on group assignment, this section of the survey ended with one or two open-ended items, using conditional branching to direct participants to questions based on school music experience. Students currently participating in music at school answered the question: "What factors led to your decision to join the music program at school? Please include as many things as you can remember that were part of your decision to take music at school." Students who enrolled in music courses in the past, but discontinued participation, answered the same question as music participants and a second question: "What factors led to your decision to stop taking music classes at school? Please include as many things as you can remember that were part of your decision to stop taking music at school." Students not currently participating in music at school answered the question: "What factors led to your decision not to join the music program at school? Please include as many things as you can remember that were part of your decision not to take music at school."

Perception of constraints. The present researcher created items intended to explore perceptions of constraints affecting participation and nonparticipation in school music informed by research in leisure studies (Harland & Kinder, 1995; Hultsman, 1992; Searle & Jackson, 1985) and music education (Waters, McPherson, & Schubert, 2014; Wolfle, 1969). To test constraint negotiation theory (Jackson et al., 1993), the present researcher created 11 items for each of the three constraint categories outlined by Crawford and Godbey (1987): interpersonal (e.g., "Lack of skills/not talented), intrapersonal (e.g., "Family not supportive of musical participation"), and structural (e.g.,

"Needed to take other classes to graduate") for a total of 33 items. Respondents used a 7-point Likert-type scale (1 = "never a problem;" 7 = "always a problem") to answer these items. All participants responded to the same list of items, with the presentation order randomized for each respondent.

This section of the survey ended with one open-ended question, in which conditional branching directed students to one of two questions based on current enrollment in music courses at school. Music participants answered the question: "If you have experienced any obstacles to your participation in school music, how did you overcome them so you could take music?" Music nonparticipants answered the question: "What other things prevented you from participating in the school music program that were not included in the survey?"

Ideas for engaging more students in music. The survey ended with three open-ended questions intended to explore ideas for engaging more students in school music programs. The researcher asked students to suggest music courses that would appeal to students: "Imagine your school is going to add new music classes based on what students are interested in taking. What class or classes would you suggest?" In responding to the second question, respondents shared their perceptions regarding the reasons that some students choose not to participate in music at their school: "Why do you think some students choose not to participate in music at your school?" The final question focused on attracting more music participants: "What would the school or music teachers need to do to encourage more people to join the music program?"

Survey Validity

In preparation for the development of the survey instrument, the researcher examined previous research on music participation, nonparticipation, leisure studies, and motivations for choosing instrumental music. The results of this literature review provided the basis for the scales selected for use in the present survey and for creating survey items designed to measure attitudes toward music and the constraints and barriers that might affect participation and nonparticipation in school music. By choosing to base the creation of new measures on the results of previous research, the researcher established a commitment to the content validity of the survey items from the beginning and to which she remained committed throughout the process. After drafting the survey, and throughout the revision process, an experienced quantitative researcher reviewed the survey and offered feedback designed to strengthen the instrument.

Two different groups also evaluated the content validity of the survey. Prior to the pilot test, a group of five individuals evaluated the survey instrument and provided feedback regarding the wording and content of the items. Among this group were one music educator with experience in both the elementary and secondary levels, three high school educators who did not teach music (two who had participated in school music as students and one who had not), and one individual outside of education who did not participate in school music as a student. The researcher asked these individuals to evaluate the readability of the survey items, their ability to understand the items, and to comment on anything that appeared to be missing or redundant among the items in the various scales. The researcher recorded their comments regarding the survey items and used these comments to make minor revisions to the instrument. For example, in the

items where respondents indicated which instruments they had learned in and out of school settings, two members of this group suggested that piano should be included as a response option. Subsequently, the researcher added this answer choice to the survey. These individuals also took the survey to test the online format on both laptops and tablet computers.

The high school students who participated in the pilot test of the survey comprised the second group from whom the researcher solicited feedback on the survey items. In reviewing the comments provided on the exit questionnaire, there were few suggestions for changes to the survey items themselves. The majority of students shared positive comments about the survey and the survey items themselves. Only one respondent had suggestions for items to be removed from the survey. These related to the expectancy-value scales used to compare values for music inside and outside of school, due to the repetition in the wording of the items.

Some of the respondents shared ideas for additional questions that might be added. A few students suggested the inclusion of items regarding musical preferences, which the researcher determined were beyond the scope of the present study. Other suggested additions to the survey were an item regarding the amount of time respondents invested in music outside of school and another inquiring whether nonparticipation in school music resulted from the lack of opportunities to study the music students were interested in pursuing outside of school. The researcher decided that these two items might provide valuable information describing the students' musical lives and their expectations of school music and added items to the survey as described at the end of the

pilot results. A copy of the survey instrument, as used in the main study, is included in Appendix C.

Sampling Procedures

The researcher used similar procedures for selecting students to participate in the study at both the pilot and main study sites. To select study participants, the researcher used a master list of all students attending the high school and a class list for all music courses meeting at the time of data collection. The researcher separated the names of students enrolled in music from the master list to create two lists, one of all school music participants and one of all school music nonparticipants. The researcher randomly selected students from each list to determine those who would participate in the present study. The researcher considered the first student at the top of each list as number "1" and consecutively numbered all of the students on each list. Using an online random sequence generator, the researcher produced two randomized lists of integers, one for school music participants and one for nonparticipants, based on the total number of students on each list. Starting at the top of the integer list, the researcher randomly selected students, by number, for participation in the study.

The format of the recruitment meetings also followed a similar, two-meeting format at both sites. The researcher met with those students invited to participate in the study during their homeroom period or during their music class. In these meetings, the researcher informed students about the study and their potential role in the project, answered questions, and distributed study information for students to take home to their parents or guardians. The study information included a cover letter addressed to the parent/guardian and two copies of the consent form: one to be signed and returned to the

researcher and one for students and parents/guardians to retain. The researcher met with students in follow-up meetings to collect forms or register their desire not to participate and visited individual classrooms to collect consent forms as necessary.

Survey pilot test procedures. For the pilot test of the survey at Shady Hills High School, the researcher randomly sampled 110 students from among those enrolled in music courses and 130 students from those who were not participating in music at school. The researcher conducted this sampling procedure in two stages. The researcher selected 40 music students and 50 non-music students from their respective lists for stage one.

The researcher met with students selected in stage one in two groups. The first group met with the researcher following the format previously described. The next day, these students returned to turn in their consent forms or register their desire not to participate. After this meeting, the researcher met with the second group of students from stage one, who did not attend the first meeting the previous day. The researcher met with the second group of students again the next day to collect consent forms or to register their desire not to participate. In addition to these meetings, two office staff members collected consent forms in the administrative office and the researcher contacted students in individual classrooms regarding their participation in the study Of the students selected for the first stage of enrollment, the researcher obtained signed consent forms from 26 students (n = 15 music participants; n = 11 nonparticipants).

Due to the small number of students who returned signed forms to participate in the study, the researcher returned to the randomized lists and selected the next 70 music students and 80 music nonparticipants. The researcher met with this second stage of students and after following up with the students who attended these meetings, obtained

consent from an additional 27 students, resulting in a total of 63 students: 40 music participants and 23 music nonparticipants. While the goal was to enroll 30 students from each group in the pilot test, the researcher decided to proceed with the administration of the survey due to the challenges in securing signed consent forms from students at the pilot school. A total of 53 students (n = 34 music participants; n = 19 nonparticipants) participated in the pilot test of the survey, which took place over two days at the school. During the days the researcher conducted the pilot survey, 10 students were absent from school and did not respond to the survey. The cover letter, parental consent, and student assent forms for the pilot study are found in Appendices D, E, and F.

Main study procedures. At Oak Valley High School, the researcher selected all 222 students taking music courses at the study site and met with those students during their music classes over two days due to the school's alternating block schedule. To collect responses from music students, the researcher stopped in music classes over several days and attended an evening band concert to collect forms. The music faculty also assisted in collecting forms from students at the beginning of their class periods. In addition, the school also initiated an automated call to remind all students to return their signed forms to the school. The researcher collected signed consent forms from 167 music participants.

Following the same procedures previously outlined for the pilot study, the researcher randomly selected 500 students not enrolled in music courses at Oak Valley High School. From this list, school personnel removed students who had left school at the end of first semester or would be unable to take the survey due to their individualized educational plans, including students who were new to school in the United States. The

researcher ultimately met with 330 music nonparticipants in a series of six meetings during homeroom periods following the procedure described for the pilot site. Due to the larger number of music nonparticipants sampled at this site, the researcher met with the music nonparticipants in three groups, with three additional meetings held to meet with students who missed the initial meetings. These meetings occurred over two weeks. The researcher sent emails to all students who attended these meetings to remind them to return the consent forms or to decline participation. The researcher contacted music nonparticipants during lunch periods and held follow up meetings during homerooms to collect additional responses. The school initiated an automated call to students' homes to remind them to return their signed forms. Throughout this process, an administrative assistant collected signed consent forms in the main school office. The researcher obtained signed consent forms from 72 school music nonparticipants.

Due to the difficulties related to enrolling an adequate number of students in the study, the school district agreed to a passive consent process for the survey portion of the research project. The researcher applied to the University IRB for approval for the change in the consent process and once approved, returned to the randomized list of students not enrolled in school music courses and selected the next 300 students. Once again, the school's administrative assistant removed students from the list as previously described, resulting in a pool of 254 additional students.

The researcher distributed an informational letter to students through their homeroom teachers. This letter informed parents and guardians about the survey and explained that they could sign and return the form to the school if they did not want their child to participate. The researcher met with students in two groups over the next two

days during homeroom to provide an overview of the project and to invite them to respond to the survey. Students who agreed to take the survey accessed the survey through an email link, provided assent on the first page of the online survey, and proceeded to the remainder of the survey. From this second sample, six students returned signed forms, indicating their desire not to participate in the survey, and 84 students responded to the survey. In total, 152 school music nonparticipants responded to the survey from the two phases of study enrollment. The cover letter, parental consent, passive consent, and student assent forms for the passive consent process are included in Appendices G, H, I, and J.

Description of Participants

Pilot test participants. Respondents for the pilot test of the survey included both music participants and nonparticipants randomly sampled from the student population in grades 9 to 12 at Shady Hills High School. A total of 53 students (n = 34 school music participants and n = 19 nonparticipants) from Shady Hills High School participated in the pilot test of the survey. The survey respondents were 68% female and 32% male, averaging 15 years of age (SD = 1.24). The majority of the respondents were freshman (42%), followed by sophomores (30%), with fewer juniors (9%) and seniors (19%). Forty-nine percent of the students identified themselves as Caucasian/White, while 26% identified themselves as Hispanic or Latina/o, 15% multi-racial, 6% Asian, 2% American Indian or Alaskan Native, and 2% Native Hawaiian or Pacific Islander. All but one of the multi-racial students provided additional information regarding the racial groups with which they identified, with each student providing a different response. For the majority of students, English was their native language (83%), followed by Spanish (15%), and

Vietnamese (2%), with 89% of non-native English speakers reporting that they spoke equally in English and their native language with family and friends. Respondents who reported being non-native English speakers indicated that they had taken at least one course for English Language Learners at school for an average of 4.25 years (SD = 4.72). The majority of respondents self-reported their grade point average as 3.1 to 4.0 (73%), followed by 2.1 to 3.0 (21%), 1.1 to 2.0 (4%), and 0 to 1.0 (2%).

Students also responded to items regarding their familial structure, parental educational attainment, and free or reduced lunch status. Sixty percent of students reported living with both parents or guardians, 26% with their mother or female guardian, 9% with their father or male guardian, and 4% with neither parent or guardian. Survey respondents indicated their mother or female guardian's level of educational attainment: 30% received a high school diploma, 19% did not finish high school, 19% graduated from a four year college, 11% graduated from a two year school, 8% completed a Master's degree or equivalent, 4% completed a doctoral or advanced professional degree, and 9% did not know. For fathers or male guardians, students reported that 32% completed high school, 13% did not finish high school, 11% graduated from a two year school, 10% from a four year school, 4% competed a Master's degree or equivalent, and 30% did not know. Sixty percent of students reported receiving free or reduced school lunch.

Main study participants. The participants for the main study were students enrolled at Oak Valley High School in grades 9 to 12. The sample size for the survey was N = 319 participants (n = 167 school music participants; n = 152 school music nonparticipants). Survey respondents were 57.7% female and 42.3% male, averaging

15.91 years of age (*SD* = 1.30). The majority of the students in the sample identified their race/ethnicity as White/Caucasian (54.5%), followed by Hispanic/Latina(o) (20.7%), multi-racial (9.1%), Asian (6.6%), Black/African American (5.3%), American Indian/Alaskan native (3.1%), and native Hawaiian/Pacific Islander (.6%). The majority of survey respondents were freshmen (9th grade, 28.8%), followed by sophomores (10th grade, 27.9%), juniors (11th grade, 22.9%), and seniors (12th grade, 20.4%). Of respondents, 82.8% reported English as their native language and 17.2% indicated other native languages, of which Spanish was the most common (10.6%), followed by Vietnamese (4.1%). Respondents also reported first learning to speak Oromo and Amharic (1.2%) and MaiMai, Greek, and Hindi (.3% each). Non-native English speakers reported taking at least one class for English Language Learners at school for an average of 3.24 years (*SD* = 2.59).

Survey respondents self-reported their grade point average, free or reduced lunch status, familial structure, and parental educational attainment. The majority of survey participants reported grade point averages from 3.01 to 4.0 (55.8%), 2.1 to 3.0 (36.1%), 1.1 to 2.0 (6.6%), and 0 to 1.0 (.3%), with 1.3% providing no response. Among respondents, 45.1% indicated that they receive free or reduced school lunch, while 54.9% did not. Most of the respondents reported living with both parents (64.6%), followed by mother or female guardian (28.8%), father or male guardian (5%), neither parent or guardian (.9%), or no response (.6%). Survey respondents indicated the educational attainment of their mothers or female guardians: 27.6% graduated from high school or received a GED, 16.3% held college degrees, 13.8% did not finish high school, 11.9 % completed a Master's degree or equivalent, 9.7% graduated from a two-year school, 2.8%

completed advanced professional degrees. Among respondents, 17.6% did not know their mother or female guardian's level of education and .3% did not respond. Survey participants reported the educational attainment of fathers or male guardians: 29.5% of students reported high school diplomas or GEDs, 15.4% did not finish high school, 9.7% either graduated from college or completed a Master's degree, 7.2% graduated from a two-year school, and 5.6% held an advanced professional degree. Among respondents, 22.6% did not know their father or male guardian's level of education and .3% did not respond.

Pilot Testing and Results

Because the researcher created the survey for this study, the pilot test assisted in identifying potential problems with the questionnaire, confirming the respondents' ability to comprehend items, and testing the survey administration procedures. The researcher conducted a pilot test of the survey in a high school similar in student population demographics to that of the research site and located in the same school district as the main study site. A random sample of 53 students participated in the pilot, which met the recommendation of 50 to 100 participants suggested by Rothgeb (2008). The researcher administered the survey in the same manner as would be used for participants in the study (i.e., under similar classroom conditions and using the same online survey format). The researcher enabled a timing device in the *Qualtrics* online survey to record the length of time required by each respondent to take the survey; the mean duration required was 22 minutes (SD = 7.32). After the completion of the questionnaire, the researcher asked the pilot participants to respond to a questionnaire to evaluate the survey items and process.

The researcher used the feedback from the pilot test respondents to guide further revisions to the survey.

The pilot test participants took the survey using their school-issued laptop computers or a school desktop computer available in the school library. The researcher read the assent form to students, which appeared on the first screen of the survey, after which they indicated their desire to participate and proceeded to the survey. At this screen, students could also indicate their decision not to participate in the survey, which would have ended their session, but none of the students chose this option. After completing the survey, students responded to a list of questions adapted from Fink (2003) and included in Appendix K. Based on these responses and the analysis of the pilot test data, the researcher revised the survey for use in the main study.

The researcher analyzed the data from the pilot test of the survey to inform further revisions to the survey. The full pilot test results are included in Appendix L. The review summarized below describes the testing of the scale reliabilities and revisions to the survey.

Scale reliability and results. The researcher used the data collected from the pilot study to test the reliability of the scales created for the present study, as well as to determine the consistency of the existing scales adapted from previous studies. Most of the respondents answered every item, though there were a few items for which responses were missing. The researcher excluded cases pairwise so that all available data for each item was used in the analyses; therefore, no cases were completely excluded. The researcher set the significance level a priori at .05. The researcher followed Nunnally's

(1978) recommendation of .70 as an acceptable level of reliability for Cronbach's alpha in evaluating all of the scales.

Perceptions and Attitudes Towards School Music scale. There were no data missing from the responses to this scale. As expected, the distributions of the data for the music participants tended to be negatively skewed, while the responses of the nonparticipants tended to be more normally distributed or positively skewed. To determine the number of factors in the scale, the researcher conducted an exploratory factor analysis. Though the sample size was small ($N = 53$), the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .72 and Bartlett's Test of Sphericity was significant at $p < .01$, suggesting that a factor analysis of the data was appropriate. The scree plot suggested one factor, onto which 11 items loaded at $r = .40$ or higher. A principal components analysis revealed that two of these items loaded lower than $r = .40$, "My elementary music teacher encouraged me to try harder" (.36) and "Our school district has a good music program" (.31). The researcher removed the item with the lowest factor loading and retained the item regarding the perceived support of the elementary music teacher, as the music nonparticipants (the focus of this research), may have only had an opportunity to participate in music at the elementary level. The scale had only one remaining item regarding music outside of school, which was also removed as a potential confound, as all other items in the scale referred to school music. Cronbach's alpha for the nine-item scale was .86, suggesting that the items had a relatively high level of internal consistency. The items retained in the scale were:

School music is fun.

I enjoy the music we learn in school.

Our school music program provides opportunities for everyone to make music.

My elementary music teacher encouraged me to try harder.

My middle school music teacher encouraged me to try harder.

My high school music teacher encouraged me to try harder.

My parents or guardians encourage me to be involved with music at school.

My parents or guardians believe learning music is important.

My friends encourage me to be involved with music at school.

The items removed from the scale with factor loadings below .3, unless indicated, were:

School music is for people who have musical ability.

Our high school has a good music program.

Our school district has a good music program (.31).

My parents or guardians encourage me to be involved with music outside of school.

My friends encourage me to be involved with music outside of school (.62).

Ability Self-Perceptions and Perceived Task Values scales. The factor structure of the scales for ability self-perception and task values has been tested and confirmed in previous research discussed in Chapters Two and Three. The researcher conducted reliability analyses for the Ability/Expectancy, Perceived Task Difficulty, and Perceived Task Values scales individually, as the items were adapted to explore differences between the perceptions of music participants and nonparticipants and between values for music both inside and outside of school. The Perceived Task Values scale consisted of three separate subscales, which were also analyzed: Intrinsic Interest Value, Attainment Value/Importance, and Extrinsic Utility Value. In analyzing the reliability of the scales,

the researcher considered the Cronbach's alpha coefficient and the mean inter-item correlation when the Cronbach's alpha coefficients were below .70. The researcher used the guideline of .2 to .4 established by Briggs and Cheek (1986), in which values within this range are considered an acceptable level of reliability. Briggs and Cheek stated that values higher than .40 might indicate scale items that are too similar to each other.

For the Ability/Expectancy and Task Difficulty scales, music participants responded regarding their performance in their current music courses, while nonparticipants considered their performance in their last school music class. As a result, the researcher analyzed these scales separately for each group. Each scale also included one item to which all students responded that was included in the analysis for both groups, "How good are you at music?" to measure ability self-perception and "How hard is music for you?" to measure perceptions of difficulty regarding music. The Cronbach's alpha coefficient for the Ability/Expectancy scale for music participants was .83 and was .72 for nonparticipants, both of which met the established guidelines. For the Perceived Task Difficulty scale, the Cronbach's alpha was .68 for the music participants and .61 for music nonparticipants. Because the Task Difficulty scale only consisted of three items each and the Cronbach's alpha coefficients were below the .70 threshold, the researcher also considered the mean inter-item correlations as an additional measure of reliability. The mean inter-item correlations were contradictory, .41 for music participants and .35 for music nonparticipants, because only the latter was located within Briggs and Cheek's (1986) recommended range.

Using the original Perceived Task Values scale items, the researcher created additional items to measure the value for music inside and outside of school. First, the

researcher examined the measure of reliability for the three individual subscales. Cronbach's alpha coefficients for the Intrinsic Interest Value scale were .94 for music in school and .97 for music outside of school. In the Attainment Value/Importance scale, the Cronbach's alpha was .94 for music in school and .97 for music outside of school. The Extrinsic Utility Value scale contained three items for music, and the Cronbach's alpha was .92. Two additional items measuring the usefulness for music outside of school comprised single items to compare students' value for music inside and outside of school. The researcher also examined the reliability of the entire Perceived Task Value scale for both music in school and music outside of school. The full nine-item scale for music in school had a Cronbach's alpha coefficient of .96 for school music and .98 for music outside of school.

The researcher decided to retain all of the items and all of the scales for use in the main study. The Cronbach alpha values were above Nunnally's (1978) recommendation of .70 for the Ability/Expectancy and Task Values scales. However, the Task Difficulty scale was an exception. The researcher decided to proceed with this scale for two reasons. First, because the number of items in the scale can affect the Cronbach's alpha coefficient value, it can be difficult to obtain acceptable Cronbach values in scales containing fewer than 10 items (Pallant, 2010). The Task Values scale contained only three items. Second, the mean inter-item correlations (Briggs & Cheek, 1986) suggested that the scale for school music nonparticipants reached an acceptable level of reliability, but that the scale items for participants might be somewhat redundant. Previous reports on the reliability of the original scales did not provide information on the mean inter-item correlations, so the degree to which redundancy among the items might be a concern was

unknown. Due to the contradictory results of the mean inter-item correlations between groups and the small number of items in the Task Difficulty scale, the researcher was not concerned that the items were too similar to each other and decided to retain all of the items for use in the main study.

Constraints to school music. There were no responses missing for the items regarding student perceptions of constraints to school music. For these items, the researcher asked music students to respond based on the degree to which they perceived each of the items to be a challenge in their school music participation. The researcher asked music nonparticipants to answer regarding the degree to which they perceived each of the items prevented them from participating in music. Recognizing the distinction between the function of constraints and barriers in participation described in Chapter Two, the researcher decided to use the term *constraints* throughout the presentation of the pilot and main study results.

The researcher conducted a principal components factor analysis to determine whether the constraint items in music loaded onto the three factors identified in previous leisure sociology literature. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .42, suggesting that the sample size was not adequate for factor analysis, even though Bartlett's Test of Sphericity was significant at $p < .01$. The researcher explored the statistical output, finding 10 factors with eigenvalues over 1 that explained 77% of the total variance, suggesting that the scale might be multidimensional. The researcher also conducted a Horn's parallel analysis as a method for exploring the factor structure using the *Monte Carlo PCA for Parallel Analysis* (Watkins, 2000). This software generates a specified number of random data sets (i.e., 100 sets) of the same size as the actual data

file (i.e., 53 cases) to explore the factor structure of the variables (i.e., 33 variables). In principal components analysis, eigenvalues that are larger than those obtained from the random data set are then used to determine the number of factors to be retained. This analysis resulted in three factors, suggesting that the factor structure previously identified in other research may also exist in this scale. Due to the small sample size, the researcher decided not to proceed with any further factor analyses with the pilot data and to include all 33 constraint/barrier statements in the survey for analysis with an adequate sample size. Therefore, the researcher did not calculate reliabilities for the constraint scales with the pilot survey data.

Survey revisions. Immediately after pilot participants completed the survey, each respondent completed an exit questionnaire (Appendix K) using questions from Fink (2003). Respondents evaluated the survey items, response choices, and the experience of taking the survey on the computer. The researcher summarized and analyzed the responses to the exit questionnaire ($N = 53$) and used this information, along with researcher memos recorded during the survey administration and the statistical analysis, to revise the survey items. The survey domains remained the same from the pilot test to the main study, with revisions to the instrument constituting minor revisions in the wording and presentation order of the items, as well the response choices for forced-choice items.

The majority of survey respondents answered every item, although there were a few items throughout the survey for which one or two students did not provide a response. To assist respondents at the research site to identify unanswered items, the researcher activated a tool provided in the *Qualtrics* program that highlighted items

respondents have not answered when they attempt to navigate to the next page. Students may choose to answer the identified item(s) or may not; in either case, the student can navigate to the next screen of the survey. The researcher also adjusted other mechanical features within the survey program to improve the survey experience for respondents. These included the removal of the progress bar, which did not function as intended, and the inclusion of a text block at the beginning of the survey to advise respondents that once they left a screen, they would not be able to go back to it.

The feedback provided by the pilot respondents guided minor revisions to some of the survey items. The researcher added the response choices, "Sing for fun by myself" and "Sing for fun with friends" to the item regarding musical activity participation outside of school based on information obtained in the open-ended responses. The most substantial revision involved reordering items within the survey. Several pilot participants found moving between items regarding music inside and outside of school confusing. As a result, the researcher grouped all items related to music in school in one section of the survey and all of the items related to music outside of school in another. Respondents also commented on the repetition of the items regarding value for music in and out of school, which were worded similarly. The researcher intended the reordering of these items to minimize any potential response fatigue due to repetition. In the Likert-type scales for ten of the constraint/barrier statements, the response choices included two appearances of the number three (i.e., numbered 1, 2, 3, 3, 4, 5, 6, 7), so the researcher corrected this error in the survey by eliminating one of the duplicate numbers.

The researcher added three items to the survey based on the feedback from pilot participants. Two of these were open-ended items, "How many hours each week do you

spend participating in music at school?" and "How many hours each week do you spend participating in music outside of school?" The researcher added these open-items to compare music involvement in and outside of school and to discover the role that music outside of school plays in the lives of high school students, particularly those who do not participate in school music. The third item was closed, "Would you take a school music class if one were offered focusing on the kind of music that interests you outside of school?" The researcher submitted the survey revisions to the institutional IRB for approval. A copy of the revised survey, used in the main study, is located in Appendix C.

Data Collection for the Main Study

The use of the survey in the initial, quantitative phase of this study allowed the researcher to collect data from a representative cross-section of the student population at the research site that informed the selection of students for the interviews constituting the qualitative stage of the study. The survey provided respondents with the opportunity to become more acquainted with the research process and the researcher in the hope that this would make students more comfortable and increase their willingness to engage in the individual interviews. Students met with the researcher in various locations at the school to complete the survey, which students completed during the school day in one class period. Students took the survey on their school-issued laptop computers using the online *Qualtrics* survey tool. The use of the online survey format facilitated maintenance of confidentiality between the study participants and the researcher, since there were no paper surveys to return. To protect data transmitted over the internet, *Qualtrics* uses Transport Layer Security encryption (i.e., HTTPS) (Qualtrics, 2014). In addition, online sessions are terminated when security parameters have been violated (Qualtrics, n.d.).

The opening screen of the survey presented study participants with information regarding their assent. While students viewed this form, the researcher reminded them that participation in the study was voluntary and that they could discontinue their involvement at any time without penalty. The researcher asked the following questions to assess students' understanding of the risks and benefits of study participation: What can you do if you don't understand a question on the survey? What happens if you don't feel like answering a certain question? What happens if you decide you don't want to participate in the study any more? The researcher also asked for additional questions, and, once these were answered, directed respondents to check "yes" at the bottom of the assent form to indicate their willingness to participate in the study or "no" to indicate their desire not to participate. Conditional branching directed students who checked "yes" to the first item on the survey and those who checked "no" to a screen thanking them for considering the opportunity to take part in the study.

The quantitative results served as the basis for the creation of the protocol for the semi-structured interviews, as well as for the selection of participants for the second phase of the study. The researcher designed questions for the interviews as a means of understanding more about how the participants' personal experiences related to the factors and barriers explored in the survey. These questions focused on empirical patterns among specific factors and barriers identified within the nonparticipation group and individual experiences with the constraint negotiation process. The questions allowed music nonparticipants to share their perceptions of constraints and barriers, how constraints and barriers affected their school music experiences, and whether the inability to navigate barriers led to their nonparticipation in the music program.

During the enrollment period, the researcher spent three to five days each week at Oak Valley High School, interacting informally with both students and teachers. The researcher observed several music classes, during which she collected field notes and engaged in conversations with each of the music teachers regarding the music program, the school, and their students. The researcher also collected artifacts, including the school district course book, an updated copy of the school's daily schedule during the data collection period, and a current report of the school's demographic information. The researcher also photographed a school district poster hanging in one music teacher's office, which connected four school district goals with arrows in a sequential manner: "music literacy → music enjoyment → music program retention → increased performance on standardized tests" (field notes, January 9, 2015).

Data Analysis

What are the musical and non-musical characteristics of students who participate and those who do not participate in the secondary school music program? The researcher hypothesized that students from underrepresented populations identified in previous research (Elpus & Abril, 2011; Stewart, 1991) were less likely to participate in the secondary school music program. The quantitative analysis included obtaining descriptive statistics calculated using the demographic variables (sex, age, year in school, racial and ethnic background, native language, socioeconomic status, academic achievement, and parents' educational attainment) to provide a description of the sample of participants in the study. The researcher used the demographic data to make comparisons between the groups defined by the demographic variables listed above, as well as between those who participated and those who did not participate in school music

programs. Because the variables were categorical, the researcher analyzed each of the demographic characteristics using a chi-square test of independence to identify significant differences between the two groups. The researcher considered all of the demographic variables for inclusion in the subsequent logistic regression model.

The researcher collected data regarding students' current and previous involvement in school music in elementary, middle, and high school. In addition, the researcher designed questions to discover what musical activities students might pursue outside of school, as nonparticipation in school music does not necessarily indicate that one is not musical or not interested in musical activities. The researcher used these data to create a description of the musical lives of school music participants and nonparticipants through their pursuit of music both inside and outside of school. The researcher also used this information to draw comparisons between school music participants and nonparticipants.

How do nonparticipating students' perceptions of music inside and outside of school influence their participation in musical activities? Based on findings from past research (Corenblum & Marshall, 1998; Eccles et al., 1993, 1998; McPherson & Hendricks, 2010; McPherson & O'Neill, 2010), the present researcher hypothesized that students who participated in school music programs would hold higher values for attitudes towards music, subjective task values, and self-perceptions of musical ability and lower values for task difficulty in music than students who did not participate in the school music program. The researcher used the total scores calculated for each of these scales (i.e., attitudes, values, self-perceptions, difficulty) to conduct one-way, between-groups analyses of variance (ANOVAs) to determine whether statistically significant

differences existed between school music participants and nonparticipants. The researcher also considered each of these variables for inclusion in the final logistic regression model on participation in school music.

The researcher used the scale scores for the value of music outside of school to explore differences within the school music nonparticipant group regarding participation in musical activities outside of school. The present researcher hypothesized that nonparticipants involved in musical activities outside of school held higher musical task values than those who did not. The researcher conducted a one-way, between-groups ANOVA for the three subscales within the Perceived Task Values scale (i.e., usefulness, interest, importance) to explore differences between groups.

What barriers and other factors contribute to student nonparticipation in secondary school music programs? The researcher hypothesized that the inability to negotiate intrapersonal, interpersonal, and structural constraints (Crawford, Jackson, & Godbey, 1991; Crawford & Godbey, 1987; Jackson, Crawford, & Godbey, 1993) results in student nonparticipation in secondary school music. The researcher used data collected through the Likert-type school music constraint items as well as narrative data collected via the open-ended items. Responses to the open-ended items regarding factors and barriers that contributed to students' decisions not to participate in school music provided additional information regarding other influences not included on the survey. The researcher had planned to "quantitize" (Sandelowski, 2000, p. 253) these responses, a process through which qualitative data are transformed from text into numerical data (Sandelowski, 2000; Sandelowski, 2014; Caracelli & Greene, 1993), for use in further quantitative analysis. However, the majority of responses referenced constraint items

already included in the survey and the researcher determined that there was not sufficient additional data to support this procedure. Since the researcher created the survey instrument for the purpose of the present study, the open-ended responses informed the modification of the survey for future use through the inclusion of factors and barriers reported by students not included in the survey.

The researcher conducted a principal components analysis to determine how the school music constraint items grouped and the number of components that existed. This procedure allowed the researcher to explore the dimensions represented within the scale, refine the scale through the removal of items, and determine whether the structure of the constraints was consistent with those explored in previous literature regarding constraint negotiation theory. The researcher tested the individual constraint sub-scales for reliability using Cronbach's alpha.

Based on findings from past research (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993; Godbey et al., 2010), the present researcher hypothesized that students who did not participate in school music programs would have higher levels of constraint than school music participants. Using the results from the principal components analysis, the researcher used the total scores calculated for each of the constraint components (i.e., personal perceptions, financial and transportation, social support, conflicting activity, and school music structural constraints) to conduct one-way, between-groups analyses of variance (ANOVAs) to determine whether statistically significant differences existed between school music participants and nonparticipants. The researcher also considered each of these variables for inclusion in the final logistic regression model on participation in school music.

The researcher created a hierarchical logistic regression model to determine which factors predicted participation and nonparticipation in the school music program. Logistic regression is a statistical procedure in which categorical and numeric variables can be combined into a single model used to predict a binary outcome. The covariates (i.e., variables) considered for this model included the demographic characteristics, musical scale scores (i.e., attitudes towards music, subjective task values, self-perceptions of musical ability, and task difficulty), and the school music constraint scale scores. The researcher categorized each of the constraint variables as representing intrapersonal, interpersonal, or structural constraints. Based on the hierarchical model of leisure constraints, the researcher entered the covariates into the model in a stepwise procedure, beginning with demographic characteristics, followed by intrapersonal factors (musical perceptions and personal perception constraints), then interpersonal factors (social support constraints), and ending with structural factors (financial and transportation constraints, conflicting activity constraints, school music structural constraints).

The standard rule for sample size in logistic regression is 10 events per variable (EPV) to provide the necessary statistical power, meaning that the minimum ratio of cases to variables required is 10:1 for the smallest group. Using the 10 EPV rule, the researcher forecasted a 15-predictor model for the overall logistic regression. The sample size planned for this study was 600 participants, which exceeded the guideline of 10 events per variable for a 15-predictor model consisting of two groups of 150 participants each. However, the recruitment of study participants did not reach the planned sample size, with only 391 study participants. While this number met the minimum for a 15-predictor model, Vittinghoff and McCullough (2007) suggested that the 10 EPV rule may

be conservative, arguing that logistic regression models with five to nine EPV may be appropriate. Based on these findings, the actual sample size was sufficient to retain statistical power for a ratio between 5:1 (two groups of 75 participants each; 150 total) and 9:1 (two groups of 135 each; 260 total).

Qualitative Research Design and Procedures

As described previously in this chapter, the researcher adopted a pragmatic paradigmatic stance, reporting in the style and the voice appropriate for each method (O'Cathain, 2009). As a result, the following section of this chapter is written in first person to acknowledge the role of the researcher in the qualitative methods and analyses discussed below.

In the second, qualitative phase of the study, I used a collective case study design (Creswell, 1998; Stake, 1995) to collect and analyze data. I selected instrumental multiple cases (Stake, 1995) to examine student nonparticipation in the school music program, embedded within one school setting, Oak Valley High School (Yin, 2014). I selected cases to "maximize what we can learn" (Stake, 1995, p. 4) through the use of purposeful (Creswell, 1998), maximum variation sampling (Miles & Huberman, 1994) of school music nonparticipants from various student populations in the school to provide different perspectives on the problem (Creswell, 1998) of nonparticipation. The unit of analysis was a current Oak Valley student who was not enrolled in the school's music program. Each of the cases was bounded by the personal experiences and perceptions of one individual and the time each student matriculated in school. I conducted within-case and cross-case analyses (Creswell, 1998; Miles & Huberman, 1994; Yin, 2014) of the

data in order to examine how perceptions and experiences with school music barriers contributed to nonparticipation.

Because the topic of this investigation presented a negative case (i.e., nonparticipation in school music), it was not possible to observe the phenomenon in action. Instead, I examined the school music program and its participants in order to confirm or contradict the perceptions offered by the informants in the interviews. This included observations of each of the music courses offered at Oak Valley High School as well as interviews with each of the five music educators on the staff, in order to help me understand the structure and operational nature of the music program. In addition, I used the survey responses from each of the informants as another source for verification of the information shared in the interviews. I remained open to collecting other information at the research site, such as class schedule information, pertinent to the study.

Qualitative Interview Protocol

In an explanatory sequential mixed methods research design, the qualitative phase explains the results obtained from the quantitative phase. Creswell and Plano-Clark (2011) suggested that the researcher determine which of four results to explain: significant results, non-significant results, outliers, or group differences. Because the present study focused on school music nonparticipation, I chose to explore the significant results from the quantitative analysis. In developing the protocol for the semi-structured interviews, I focused on differences in attitudes, perceptions, and values for music inside and outside school and experiences with school music constraints. Because the present study focused on the phenomenon of nonparticipation, I designed questions to explore individual, lived experiences with school music and perceived barriers to participation, as

well as influences on attitudes toward, values for, and perceptions of school music. I also designed questions to explore participation in musical activities outside of school among nonparticipants.

I designed the first item of the protocol to give the interview participants an opportunity to share their individual experiences with school music, beginning in elementary school. As high school students, the interview participants had the ability to reflect upon their previous school music experiences and their reasons for not participating, or discontinuing, school music. I designed questions to inquire about perceptions of school music and the potential influence of family or friends on these perceptions. I also created questions to explore how the influence of friends and family affected their decisions not to participate in school music.

Due to the results of the overall logistic regression model, within which three constraint categories proved significant predictors of participation in school music, many of the questions focused on individual experiences with school music constraints. I devised a method to connect the interview participants' personal experiences to the school music constraint items from the survey. Using the components generated through the principal components analysis, I generated five pieces of paper, one for each constraint component, on which I printed the constraint items from the survey. I created an activity for the interviews in which I asked each participant to order the constraint components from most influential to least influential in the decision not to participate in school music. This arrangement set the stage for a discussion of the ways in which these constraints operated in the participants' lives and, in reading the constraint items, served to remind informants about other constraints they might have experienced.

I created questions to explore ideas for engaging more students in school music, including how music teachers might have helped them to overcome the barriers they personally experienced to participation. I also designed questions to discover what new courses the interview participants would be interested in taking, were they offered, and how these classes might operate. I generated questions to explore musical involvement outside of school, as well as perceived differences between school music and music outside of school. A copy of the interview protocol is located in Appendix M. The interview protocol was semi-structured to allow me to pose additional questions as necessary to follow up on statements that arose naturally in the conversation with each interview participant.

In conducting interviews, the researcher has two primary objectives (Yin, 2014). First, the researcher must follow the protocol developed for the interview in order to answer the research questions. Second, the researcher should pose the questions in an unbiased manner to minimize feelings of defensiveness on the part the interview participants. Throughout the interview process, I worked to phrase questions in a manner that was conversational in nature in order to help the students feel comfortable while speaking with me.

Sampling Procedures

For the qualitative phase of the study, I selected 12 respondents from the initial quantitative sample to participate in semi-structured interviews using a purposeful sampling method. As the results of the quantitative data analysis supported the theory of constraint negotiation (Jackson et al., 1993), I selected students who were correctly predicted by the logistic regression model to be nonparticipants in school music. In

addition, I purposefully selected interview participants to include those from among both underserved and over-served student populations revealed in previous research (Elpus & Abril, 2011). This allowed me to learn about the experiences of a diverse array of students who do not participate the school music program.

Based on responses to the survey, I selected an equal number of students who were male or female, received free or reduced lunch or did not, and discontinued participation in school music or had never participated in school music. To provide representation from a variety of racial and cultural groups, I chose five Hispanic, four White, two Black, and one Asian student for the interviews. An American Indian student originally selected for the interview phase of the study was no longer attending Oak Valley when I returned, resulting in the selection of an additional Hispanic student who was also female, received free or reduced school lunch, and had discontinued school music. This brought the total number of Hispanic interview participants to six.

Once the selection of students was complete, I returned to Oak Valley High School, contacted each of the students, and invited them to participate in the interviews. All of the students selected for the interviews agreed to participate. Because five of the students selected enrolled in the study under the passive consent process, I provided an informational letter and parental consent form for their parents to sign, and all of these students returned signed consent forms. Copies of the cover letter, parental consent form, and student assent forms are located in Appendices N, O, and P.

Interview participants. To protect the confidentiality of the interview participants, like the school names, all individual names included in this report are pseudonyms. The demographic characteristics of the interview participants are

summarized in Table 4. Detailed descriptions of each individual appear in Chapter Five, serving to introduce each case and to situate each student's thoughts and perceptions regarding school music in the context of their personal experiences. These descriptions include a summary of the survey responses to the scales regarding attitudes toward, beliefs in, and values for school music. Detailed descriptions of each individual's experiences with music inside and outside of school, as well as the current place of musical participation in their lives, are also provided.

Data Collection

I observed each of the music classes meeting during the data collection period to discover how each operated in terms of the styles of repertoire studied, the instructional strategies used by each teacher, and the types of activities in which students engaged during class. In addition, I interviewed all of the music teachers to determine how they structured each program (i.e., band, choir, orchestra), their expectations for students, and their perceptions of the elementary and middle school programs across the district. I used these field notes and transcripts of the teacher interviews to confirm or contradict information provided by the interview participants regarding their perceptions of school music program and the various music courses offered.

Once I selected the potential interview participants, I met with each student briefly in the school administrative office to invited her/him to participate in the interview. In this meeting, I gauged students' willingness to participate in the interview, answered their questions, and provided a copy of the parental consent form for the interview to those students enrolled in the study through the passive consent process.

Table 4

Demographic Characteristics of Interview Participants

Name	Sex	Race/ ethnicity	Age	Grade in school	Grade point average	Familial structure	Parental educational attainment	Free/reduced lunch status
Ayeshia	Female	Hispanic/Latina	15	Sophomore	3.1-4.0	Both parents	Neither high school graduates	Yes
Carly	Female	White/Caucasian	15	Sophomore	2.1-3.0	Both parents	Both high school graduates	No
Daniel	Male	White/Caucasian	17	Junior	3.1-4.0	Both parents	Both high school graduates	No
Elena	Female	Hispanic/Latina	15	Sophomore	3.1-4.0	Both parents	Mother high school graduate, Father did not	Yes
Ibsaa	Male	Black/African American	18	Junior	2.1-3.0	Mother	Neither high school graduates	Yes
Ignacio	Male	Hispanic/Latino	15	Freshman	2.1-3.0	Mother	Mother college, Father high school graduate	Yes
Kahlil	Male	Black/African American	17	Senior	2.1-3.0	Mother	Did not know either	Yes
Nicole	Female	Hispanic/Latina	15	Freshman	3.1-4.0	Both parents	Both two year college graduates	Yes

Olivia	Female	White/Caucasian	17	Junior	3.1-4.0	Both parents	Both high school graduates	No
Sophie	Female	Hispanic/Latina	17	Junior	2.1-3.0	Both parents	Both Master's degree or equivalent	No
Thanh	Male	Asian	18	Senior	3.1-4.0	Both parents	Neither high school graduates	Yes
Trenton	Male	White/Caucasian	16	Junior	3.1-4.0	Both parents	Both high school graduates	No

Students who agreed to the speak with the researcher scheduled a time for the interview with the assistance of the school's administrative secretary.

I met with each of the students individually for the interviews, which took place at the school, during school hours, in a vacant room connected to the main office. When students arrived, I greeted them and provided a copy of the assent form for them to sign. I reminded students that participation in the interview was voluntary and that they could discontinue their involvement at any time without penalty. I also asked each interview participant the three questions used during the survey to assess understanding of the risks and benefits of study participation. After asking for, and answering, any additional questions, students signed the form to give assent for the interview. The interviews were audio recorded and later transcribed for analysis using *ExpressScribe* software.

Data Analysis

How do barriers and other factors affect students' decisions not to participate in school music programs? What reasons do students give for not participating or discontinuing their participation in school music programs? What revisions to current secondary school music programs might engage a larger percentage of the student population? The survey provided an opportunity for me to gather data from a cross-section of students at Oak Valley High School regarding their experiences with, and ideas for, the school music program. I included open-ended items on the survey to gather more qualitative data from the nonparticipants enrolled in the study than would have been possible from the interviews alone. I used these items to provide opportunities for all survey respondents to share their experiences with school music and constraints to participation that might inform future research or revisions to the

survey instrument. I analyzed these responses separately, using the qualitative coding process described below to generate themes from the narrative data, and then used the data gathered in the interviews to explain these results.

I used Miles and Huberman's (1994) flow model for data analysis (i.e., data reduction, data display, and drawing conclusions/verifying), moving from within-case to between-case analysis (Creswell, 1998; Miles & Huberman, 1994). The process for analyzing the data resembled the data analysis spiral described by Creswell (1998). I proceeded in a cyclical, iterative, and abductive (Morgan, 2007) process between the three analysis activities outlined by Miles and Huberman to build an interpretation from the data and emerge with a narrative. I analyzed the data using *HyperResearch*, a computer program to facilitate qualitative data analysis.

The first stage of analysis (data reduction) organizes, focuses, and summarizes data in a way that distills large amounts of data into more manageable forms that facilitate the drawing of conclusions (Miles & Huberman, 1994). Creswell and Plano-Clark (2011) suggested that sequential explanatory mixed methods studies start with the creation of topic codes (e.g., barriers, constraints, values, perceptions) as a method of using the quantitative analysis to inform the qualitative analysis. The use of these codes in the first stage of the analysis constituted a deductive approach (LeCompte & Schensul, 1999), during which I identified all of the data related to the various topic codes within each case (Richards & Morse, 2013). During this stage, I also recorded observations related to possible patterns and potential codes that arose from the data, thus working in an inductive manner (LeCompte & Schensul, 1999). I operated in a recursive process,

exploring the data deductively and inductively and moving between a priori and emergent codes.

From these initial interactions with the data, I began to create a codebook and wrote summaries of the participants' experiences with school music. Throughout the entire data analysis process, I frequently returned to the research questions and theoretical frameworks that guided this study, to determine how they might inform the coding process. Next, I used descriptive codes to build an understanding of the subjects and their experiences, as well as analytic coding to develop themes and categories as the analysis progressed (Richards & Morse, 2013). I returned to the transcripts several times throughout the analysis process, creating codes, themes, and summaries as part of the data reduction process and writing memos to record thoughts and speculations (Glesne, 2011).

After coding the data, I created data displays to condense the data into a more compact form to "see what is happening" (Miles & Huberman, 1994, p. 11) and to move to the next analytic phase. This included creating concept maps to display codes, as well as patterns, connections, and hierarchies within and between these codes. These concept maps assisted me in visually organizing the data in order to develop themes from the codes and to identify recurring patterns. As the themes emerged, I created new concept maps to organize the themes, display the codes within them, and make connections between the themes and codes that emerged within each individual case. Throughout this iterative process, I continually recorded new thoughts about the data, returned to the transcripts to confirm emerging themes, and reconsidered the research questions.

Drawing conclusions and verification are the processes through which my interpretations become final, using the data to confirm these conclusions (Miles & Huberman, 1994). Drawing conclusions from the data "is only half of a Gemini configuration" (p. 11), as these conclusions must also be verified, which constitutes the other half. During this stage of the analysis, I returned to the transcripts, memos, and field notes to verify conclusions and confirm the meanings drawn from the data. This stage also included triangulating data from the interview data with the survey responses and field notes to identify areas of convergence and divergence. The interview participants and external auditors also reviewed my interpretations as part of a verification process, described in the next section.

Following the within-case analysis, I repeated the analytical process for each of the three stages described above to conduct a between-case analysis. I reduced the data through the identification of codes, location of patterns, and development of themes across cases. Data displays allowed me to visually display how the codes and themes converged or diverged between cases and identify emerging between-case themes (discussed in detail in Chapter Five). I returned to the transcripts, memos, field notes, and survey responses to verify the conclusions drawn from the data.

Verification. Creswell (1998) suggested eight verification procedures for establishing validity or trustworthiness in the data analysis process, suggesting that researchers perform at least two. These procedures were: prolonged engagement in the field, triangulation, peer review, negative case analysis, clarifying researcher bias, member checks, thick description, and external audits. I used three of these procedures: member checks, external audits, and clarifying researcher bias.

I asked interview participants to engage in member checks (Creswell, 1998; Lincoln & Guba, 1985; Miles & Huberman, 1994), which Lincoln and Guba considered to be "the most critical technique for establishing credibility" (p. 314). First, I emailed the interview transcripts to the participants in an electronic file format (i.e., Microsoft Word documents) that students could access using their school-issued laptop computers. I asked students to read the transcripts to confirm the accuracy of the content and to make additions or corrections as needed in uppercase, bold lettering. I instructed participants to save any changes to the file and then email the revised file back to me. In the first stage of the analysis, I wrote a summary of each interview participant's school music experiences, which I asked each student to review as a means of verifying the credibility of the researcher's interpretation. I encouraged interview participants to evaluate the accuracy of my account of their experiences and make corrections as needed. Based on this feedback, I made minor revisions to the interview participants' stories.

External audits of the qualitative data provided another means of verifying the researcher's interpretation (Creswell, 1998; Lincoln & Guba, 1985; Miles & Huberman, 1994). This process assisted in establishing credibility for the qualitative analysis (Creswell, 1998; Lincoln & Guba, 1985). Two qualitative researchers external to the study reviewed my analytic processes and interpretations to determine whether the data supported my conclusions. I provided both individuals with two interview transcripts, one coded and one not, and the codebook. The external reviewers examined the coded interview transcript and coded the second transcript to confirm or challenge the interpretations I had reached. I also requested that the auditors suggest additional codes not included in the codebook.

The final method for establishing trustworthiness was to clarify the bias of the researcher. As an individual who participated in school music from my very first year in school, I had always been a school music participant. My experiences with school music nonparticipation as a K-12 student occurred through my friends who chose not to enroll in music courses at school. Later, as a music educator, I would assist countless students in overcoming the obstacles to continued participation in the school band program. As a music educator with 18 years of experience teaching students in elementary general and instrumental music settings, I recognized that my prior knowledge might influence my observations, interpretations, and analyses. However, I was also intensely interested in discovering how music educators might engage more students in school music. I viewed this research as an opportunity to learn from those students with whom I rarely interacted, or knew only briefly, before they discontinued school music. Throughout the process, I examined my biases and preconceptions through reflection and questioning, which I recorded in my field notes.

Before I started data collection, I considered the role that I would play as a researcher in the pilot and main study settings. I was cautious about becoming actively involved in the music classes at the school, as I feared that it would enhance my "music biases" more than if I maintained a more neutral, observer-focused position. There were many days that I wandered the cafeteria at Oak Valley High School during the lunch periods so that I would have more opportunities to interact with the school music nonparticipants. Glesne (2011) described the role of the researcher on a continuum from passive participation to fully active participation in the research setting. Using Glesne's terminology, I entered the setting as an *observer as participant*, meeting with students to

talk about the project and answering questions in music classes and in homerooms. As I spent more time at Oak Valley (due to the extended enrollment period for the study), I interacted with students, faculty, and staff informally throughout the school, but did not actively participate in its daily activities.

Finally, I explored my bias by reflecting upon and *bracketing*, or "placing aside" (Richards & Morse, 2013), my previous experiences and knowledge regarding student nonparticipation in school music. Bracketing is a procedure used in phenomenological research, a type of qualitative inquiry in which the researcher seeks to understand a phenomenon, or concept, through the lived experiences of participants. This process seemed essential in an effort to "suspend all judgments" (Creswell, 1998, p. 52) and to focus on the lived experiences of the interview participants (Richards & Morse, 2013). Therefore, I reflected upon my experiences as an instrumental music educator in assisting students to overcome obstacles to continued school music participation in the following epcohe (Creswell, 1998).

Jennifer's nonparticipation epoche. My research interest in student nonparticipation in school music emerged out of my experience as a K-12 music educator. In my last teaching position as the Director of Bands at a large, Midwestern high school, I was disturbed by the fact that the students participating in the instrumental ensembles were not a reflection of the diversity in the overall student body of the school. The membership of the band program, as well as that of the music program in general, was predominantly White and middle class. By my final year at that school, our student body had grown to include students from 30 countries speaking approximately 40 different languages, one-third of whom were economically disadvantaged. Yet, as the

school became more diverse, the band program only did so slightly, growing to include students who were economically disadvantaged and, later, others whose families were Eastern European, Asian, Hispanic, and Black. Despite this progress, the number of students from these populations remained small.

As I worked with the elementary and middle school programs that served as a feeder for students who would eventually enroll in my high school, I became even more aware of a disconcerting trend. The elementary elective instrumental music programs (e.g., band and orchestra) were quite diverse and representative of the populations of the schools from which they came. Yet, the middle school ensembles were less diverse, but still more diverse than our high school program. Why did these students, representing ethnically and economically diverse backgrounds, choose to discontinue their participation in elective music? This experience led me to an even bigger question: Why were there so many students in our school who did not participate in any of our music courses? I surmised that one reason was likely the fact that our music program was primarily a traditional, ensemble-based, performance-driven enterprise. However, my encounters with individual students each spring as they completed registration forms suggested the issue was more complex.

Deciding it was better to be proactive than reactive, I assisted my students in getting band class to "fit" into their schedules, so they could continue their involvement in the program. This included engaging in conversations with students who were thinking about dropping out of band for various reasons. As I worked with these students, it became clear that a number of obstacles to their participation existed. In some cases, my ability to help students in overcoming these obstacles resulted in their

continued participation. For other students, the choice to pursue new endeavors, whether in academics or other activities, was more attractive. I discovered that students were more inclined to continue their participation in the program when I could offer solutions to the problems they encountered. Sometimes, it was as easy as finding an instrument for a student to play because his family could not afford to purchase one. In other cases, it involved rearranging a student's intended four-year plan or suggesting coursework that fit her educational goals and still made room for a band elective. Some students needed more support for their music-making at school than they could receive at home, such as having a place to practice, receiving extra help, and even simply having someone to encourage them in their struggles or to celebrate their accomplishments. The complexities of the situations facing my band students were likely only the "tip of the iceberg" when I considered the possible reasons that caused other students to discontinue participating in school music or to elect not to participate in music at all.

One of the most valuable lessons I learned from my students was that *everyone* had obstacles, but *every one's* obstacles were different from those of others. This taught me to learn from my students and their personal experiences, to listen to their voices and stories, and to be creative in suggesting solutions personalized to meet their particular needs. These experiences were highly influential on me as a human being, as an educator in my teaching practice and, later, as a graduate student. I believe strongly in the importance of a quality music education for every student as a part of his or her general education. I learned that all students face their own set of challenges, and they have different abilities and coping strategies. Most of all, I learned that sometimes students just needed a little help.

Mixed Methods Analysis

In what ways do the interview data reporting students' reasons for nonparticipation in secondary school music help to explain the quantitative results about nonparticipation reported on the surveys? The researcher assembled a mixed methods data matrix to organize the quantitative and qualitative data by research question. The matrix included results from both the quantitative and qualitative data and the degree of alignment between them for each of the three research questions. Topically related data were displayed side-by side for easy comparison. "Data convergence labels" (Fitzpatrick, 2011) described the degree of alignment for results addressing the same topic. The label "confirm" (p. 236) described results in agreement between the two strands. "Contradict" (p. 236) described results from each method that were in opposition. Results that were both confirmatory and contradictory concerning different aspects from each data set were "mixed" (p. 237). When the results provided different perspectives on the same topic, neither in agreement or disagreement, the term "enhance" (p. 237) served as the descriptor.

The mixed methods matrix assisted in drawing meta-inferences to discover how the qualitative data helped to explain the quantitative results. From the full data matrix, a smaller joint display of the quantitative and qualitative results succinctly summarized the results as part of the discussion and conclusion (Creswell & Plano-Clark, 2011). This display presented the results from left to right in the chronological sequence in which the research progressed and will be explained in detail in Chapter Four.

Chapter Summary

The mixed methods design selected for this study allowed the researcher to use numeric and narrative data to tell the story of music nonparticipation among the high school students in the sample. A primary benefit of the sequential explanatory approach was in its ability to build a more detailed and deeper understanding of the quantitative results through qualitative data. The development of the survey for this study, grounded in research from various fields, provided the researcher an opportunity to consider how demographic characteristics, motivations towards music, attitudinal factors and experiences with constraints and barriers affect students' decisions to participate in school music programs. This chapter provided detailed descriptions of the procedures for sampling, data collection, and analysis, along with an introduction of the research context and study participants. The next chapter presents the quantitative results obtained by the researcher using these methods.

CHAPTER FOUR: QUANTITATIVE RESULTS

The present study examined the factors that underlie students' decisions not to participate in their school music programs and the perceived barriers to their participation in such programs. This chapter presents the results of the quantitative analysis of the data collected in the surveys during the first phase of the study comparing students who participate and those who do not participate in their school music program. These results are organized into three sections, addressing each of the research questions that guided the quantitative phase of the study:

1. What are the musical and non-musical characteristics of students who participate and those who do not participate in the secondary school music program?

   Hypothesis: Students from underrepresented groups identified in previous research (Elpus & Abril, 2011; Kinney, 2010; Stewart, 1991) will be less likely to participate in the secondary school music program.

2. How do nonparticipating students' perceptions of music inside and outside of school influence their participation in musical activities?

   Hypothesis: Student perceptions regarding the interest, importance, and utility (e.g., subjective task values) of music inside school are different from those for music outside of school (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010).

3. What barriers and other factors contribute to student nonparticipation in secondary school music programs?

   Hypothesis: The inability to negotiate intrapersonal, interpersonal, and structural constraints (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson,

Crawford, & Godbey, 1993) results in student nonparticipation in secondary school music.

Quantitative Analysis

The survey designed for the present study used a Likert-type scale format, in which respondents rated their perception of a single item along a 7-point scale. Statisticians consider Likert-type scales an ordinal measurement because the response categories have a rank order and the intervals between categories cannot be assumed to be equal (Pett, 1996). For example, when participants respond to an item using a scale that provides categories of response, such as "poor, fair, good," it is not possible to determine whether the distance between "poor" and "fair" is the same as the distance between "fair" and "good." However, when the Likert-type scale presents possible responses using numeric values, such as a scale numbered from 1 to 7, there is disagreement about how to classify these numeric values. With numeric values, the scale can be considered continuous, as the intervals between the numbers suggest a relationship of equal distances that does not exist in scales using categorical labels.

The use of parametric statistical tests with data obtained through ordinal scales is a controversial topic in the research community. Some researchers object to the treatment of ordinal data as interval data in analysis due to their categorical nature, which makes mathematical calculations, such as means, inappropriate (Jamieson, 2004; Kuzon, Urbanchek, & McCabe, 1996). Other researchers argue that parametric statistical tests, such as analysis of variance, are appropriate with ordinal data due to their robustness (Carifio & Perla, 2008; Norman, 2010). Carifio and Perla (2008) claimed that Likert-

type items summed across a scale produced interval data (i.e., continuous, rather than categorical) and were appropriate for use in parametric tests.

As a result of these latter conclusions, the researcher decided to treat the Likert-type scale responses as continuous data. The format for the Likert-type scale items was similar for both the existing and new scales used in the survey. The response scales were numbered 1 through 7 with text labels on the anchors at each end (1 = "*strongly disagree*" and 7 = "*strongly agree"*; or 1 = "*always a problem*" and 7 = "*never a problem*"), which allowed respondents to view the intervals between each number as equal, and thus, continuous. Therefore, the researcher treated the data as continuous, interval data in the analysis that follows.

Research Question 1

What are the musical and non-musical characteristics of students who participate and those who do not participate in the secondary school music program?

Demographic characteristics. The researcher conducted a Pearson's Chi-square Test of Independence to examine the relationships between the level of music participation and demographic characteristics of study participants. The researcher used the Yates' Correction for Continuity values for all 2-by-2 tables and Pearson's Chi-square values for all other tables. The majority of survey respondents answered every survey item, so the researcher included all cases in the analysis, excluding cases pairwise when the data necessary for the analysis was missing. Due to the number of planned statistical analyses, the researcher set a more conservative significance level ($\alpha = .01$) throughout the study. The standardized residuals were computed as a post-hoc analysis to further

describe the nature of the relationships of each demographic characteristic with school music participation. The researcher examined the standardized residuals, reported as z-scores, between the observed and expected cell frequencies to determine which groups were over- and underrepresented in the school music participant and nonparticipant groups.. The critical value was set at +/-2.58 a priori, which corresponded to an alpha of .01. Those z-scores with a positive value higher than 2.58 indicated characteristics overrepresented in the sample, while negative values below -2.58 indicated characteristics underrepresented in the sample. The discussion that follows is focused on the significant results of the Chi-square analyses and the post-hoc examination of the standardized residuals. The full results, including the standardized residuals for both school music participants and nonparticipants, are provided in Table 5.

Significant relationships existed between music participation and sex, native language, and free or reduced lunch status. A Chi-square test of independence (with *Yates Continuity Correction*) indicated a significant relationship between music participation and sex, χ^2 (1, n = 319) = 6.43, p = .011, *phi* = .15, as more females than males in the sample participated in school music. In the post-hoc analysis of the values for the standardized residuals, neither gender could be considered over- or underrepresented in either the participant or nonparticipant groups. A Chi-square test (with *Yates Continuity Correction*) revealed a significant relationship between music participation and native language, χ^2 (1, n = 319) = 26.34 p = < .001, *phi* = .30. Non-native English speakers were significantly underrepresented among music participants and significantly overrepresented among nonparticipants, with standardized residuals of -3.3 and 3.5, respectively. A Chi-square test of independence (with *Yates Continuity*

Table 5

Pearson Chi-Square Tests of Independence for Demographic Characteristics and School Music Participation/Nonparticipation

Characteristic	*df*	*N*	χ^2	*p*	Standardized residuals: Participants	Standardized residuals: Nonparticipants
Sex	1	319	6.43+	.011*		
Female					1.2	-1.2
Male					-1.4	1.5
Race/ethnicity	5	319	57.76	< .001*		
American Indian/Alaskan Native, Native Hawaiian/Pacific Islander					-.9	1.0
Asian					-.9	.9
Black or African American					-.6	.7
Hispanic or Latina(o)					-3.3*	3.5*
Multi-racial					-1.6	1.7
White/Caucasian					3.4*	-3.6*
Native English	1	319	26.34+	< .001*		
Yes					1.5	-1.6
No					-3.3*	3.5*
Free/reduced lunch	1	319	22.14+	< .001*		
Yes					-2.5	2.6*
No					2.2	-2.3
Familial Structure	1	317	2.19+	.14		
One or neither parent/guardian					-.9	.9
Both parents/guardians					.7	-.7
Highest level parental education	4	318	23.70	< .001*		
Don't know					-1.2	1.2
High school diploma or less					-1.6	-2.8*
Two-year school/college degree					.1	-.3

Four-year college degree					.3	-.1
Master's/Doctoral/professional degree					2.7*	1.6
Grade point average	2	315	14.06	.001*		
0 to 2.0					-2.2	2.3
2.1 to 3.0					-.5	.6
3.1 to 4.0					1.2	-1.3

Note: $^{+}\chi^2$ with *Yates Continuity Correction*; * $p < .01$

Correction) indicated a significant relationship between music participation and free or reduced lunch status, χ^2 (1, n = 319) = 22.14, p < .001, *phi* = -.27. Students receiving free or reduced lunch were significantly overrepresented among nonparticipants with a standardized residual of 2.6.

To meet the assumption that at least 80% of the cells meet the expected frequency of 5 for a Chi-square analysis (Pallant, 2010), the researcher collapsed categories within the independent variables grade point average and race/ethnicity. Due to low cell counts, the researcher combined the lowest two categories for grade point average (i.e., 0 to 1.0 and 1.1 to 2.0), resulting in three categories: 0 to 2.0, 2.1 to 3.0, and 3.1 to 4.0. The researcher combined the two categories with the smallest counts for race/ethnicity, resulting in one category for American Indian/Alaskan native and Hawaiian native/Pacific Islander. There were three additional categories for race/ethnicity: Asian, Black/African American, and multi-racial (students who identified with two or more races.)

The results of a Chi-square test revealed a significant relationship between music participation and grade point average, χ^2 (2, n = 315) = 14.06, p = .001, *phi* = .21. Among school music participants, 161 of 165 respondents reported grade point averages above 2.01. However, the post-hoc analysis of the standardized residuals revealed that none of the grade point average groups were under- or overrepresented among participants or nonparticipants. A Chi-square test of independence indicated a significant relationship between music participation and race/ethnicity, χ^2 (5, n = 319) = 57.76, p < .001, *phi* = .43. Among school music participants, 74% were White/Caucasian, nearly three times more than the other race/ethnicity categories combined. The standardized

residual of 3.4 indicated that White students were significantly overrepresented among music participants, while a standardized residual of -3.3 indicated that Hispanic students were significantly underrepresented. For the nonparticipant group, White students were significantly underrepresented and Hispanic students were significantly overrepresented, with standardized residuals of -3.6 and 3.5, respectively.

To allow direct comparison with the most recent national demographic profile, the researcher used the highest educational attainment reported between both parents and reduced the number of categories to five. The resulting categories were: high school diploma or less, two year college, four-year college, Master's or professional degree, and "don't know." The relationship between music participation and parental educational attainment was significant, χ^2 (4, n = 318) = 23.70, $p < .001$, *phi* = .27. An almost equal number of music participants reported parents receiving a high school diploma or less (n = 54), and parents with Master's or other professional degrees (n = 53). In contrast, the largest number of music nonparticipants indicated parents with a high school diploma or less (n = 74). In examining the standardized residuals, only students whose parents held a Master's or professional degree were significantly overrepresented among school music participants with a standardized residual of 2.7. In the nonparticipant group, students whose parents received a high school diploma or less were underrepresented with a standardized residual of -2.8.

To meet the assumptions for the expected cell frequencies, the researcher created two categories for responses regarding familial structure, living with both parents/guardians and living with one or neither parent/guardian. A Chi-square test (with *Yates Continuity Correction*) indicated no significant relationship between music

participation and familial structure, χ^2 (1, n = 315) = 2.19, p = .14, *phi* = .09. The majority of school music participants (69%) and nonparticipants (61%) lived with both parents/guardians.

There was a statistically significant relationship between school music participation and sex, race/ethnicity, native language, free or reduced lunch status, grade point average, and highest parental educational attainment. Familial structure was the only variable that was not significantly related to music participation. Within each of these demographic characteristics, as described above, various populations were significantly under- or overrepresented among school music participants and nonparticipants. Hispanic students and non-native English speakers were significantly underrepresented among school music participants. White students and those whose parents held a Master's or advanced professional degree were significantly overrepresented among school music participants. Hispanic students, non-native English speakers, and those who received free or reduced school lunch were significantly overrepresented among nonparticipants. Based on these results, the researcher failed to reject the hypothesis that students from underrepresented groups identified in previous research (Elpus & Abril, 2011; Kinney, 2010; Stewart, 1991) would be less likely to participate in the secondary school music program.

Scale reliabilities. To determine whether significant differences existed between school music participants' and nonparticipants' perceptions, attitudes, and values for music, the researcher conducted a series of one-way, between-groups analyses of variance (ANOVAs). Throughout this process, the researcher encountered violations of the assumptions for the ANOVA procedure regarding normality and outliers, each of

which is described in the analyses that follow. The researcher examined the internal reliability for each of the scales using Cronbach's alpha. All of the scales had alpha values above .70 (Nunnally, 1978), indicating good to relatively high internal consistency (Table 6). As there was only one item each comparing extrinsic utility value (usefulness) of music inside and outside of school, the researcher did not conduct reliability analysis for these single items.

Table 6

Scale Reliabilities

Scale	Cronbach's alpha
Perceptions and Attitudes Toward School Music	.88
Ability/Expectancy - School music participants	.84
Ability/Expectancy - School music nonparticipants	.86
Perceived Task Difficulty - School music participants	.72
Perceived Task Difficulty - School music nonparticipants	.77
Perceived Task Values - School music	.94
Perceived Task Values - Music outside of school	.94
Intrinsic Interest Value - School music	.92
Intrinsic Interest Value - Music outside of school	.90
Attainment Value/Importance - School music	.90
Attainment Value/Importance - Music outside of school	.93
Extrinsic Utility Value - Music	.87

Perceptions and Attitudes Toward School Music, Ability/Expectancy, and Task Difficulty scales. These scales measured student attitudes toward music and student self-perceptions of ability in, and the difficulty of, music. Outliers existed in the data for all of the expectancy/value scales, but the researcher decided to retain the outliers in the data set for three reasons. First, the ANOVA procedure is fairly robust in regard to deviations

from normality, particularly when the sample sizes of the groups are nearly equal as was the case in this study. Second, the researcher's primary concern was to analyze and present the data as it was reported by the survey respondents with as few adjustments to, or eliminations of, the data as possible. Finally, in most cases, the presence of the outliers actually reduced the differences between the group means. The mean scores for nonparticipants regarding attitudes, ability, difficulty, and values for music (which will be discussed under research question three) were higher than those for participants. The outliers for five of the six scales existed among school music participants, located below the means for the rest of the group. These outliers had the effect of lowering the overall group mean and subsequently decreasing the difference in means between groups. Retaining the outliers resulted in a more conservative statistical calculation than if the researcher removed the outliers. On this basis, the researcher decided to retain these outliers in the analyses.

There was one exception, for the Task Difficulty scale, in which three outliers existed among school music nonparticipants and were higher than the means for rest of the group. Again, favoring a more conservative approach, the researcher decided to remove the outliers from the analysis, rather than risk results biased toward significance by the outliers. The procedures followed by the researcher for removing the outliers are described in the analysis that follows.

For each scale, the researcher calculated a composite score by totaling the scores from the items within the scale and used this summed score for the analysis. The significance level for all ANOVAs was set a priori at .01, as stated above, to provide a more conservative estimate of statistical significance. The researcher calculated effect

sizes using eta squared and interpreted the values according to Cohen's (1988) classification: .01 is a small effect, .06 is a medium effect, and .14 is a large effect size. The Welch ANOVA procedure did not yield a statistic for the effect size for the sample, so, for these procedures, none were reported.

Perceptions and attitudes toward school music. The researcher conducted a one-way, between-groups ANOVA to compare perceptions and attitudes toward school music between school music participants and nonparticipants. There were no outliers among responses to these scales, but the data distributions were not normal for either group, as indicated by significant results on the Shapiro-Wilk tests ($p < .05$). Mean scores for school music participants were negatively skewed, indicating more positive attitudes toward school music, while mean scores for nonparticipants were positively skewed, indicating more negative perceptions regarding school music. Levene's test was not significant ($p = .051$), revealing homogeneity of variances. There was a significant difference in perceptions and attitudes regarding school music between participants and nonparticipants, $F(1, 312) = 211.87$, $p < .001$. Participants reported significantly higher mean scores ($M = 47.37$, $SD = 9.51$), reflecting more positive attitudes toward school music, than nonparticipants ($M = 30.69$, $SD = 10.79$). The results of the eta squared calculation revealed a large effect size ($\eta^2 = .40$).

Musical ability/expectancy and musical task difficulty. The researcher conducted one-way, between-groups ANOVAs to compare the perceived abilities and expectancies for success and perceived task difficulty in music between school music participants and nonparticipants. Recall that the items in the Ability/Expectancy and Task Difficulty scales varied slightly in wording, with participants responding based on their perceptions

of their current music course and nonparticipants responding based on the last music course in which they enrolled. The analysis for each of these scales contained one item to which all students responded. Due to the slight variations in the wording of the items for each group, caution should be exercised when interpreting the results.

There were five outliers among the music participants, all of which were data points lower than the rest of the group. The data were not normally distributed for either group, as indicated by significant results on the Shapiro-Wilk tests for both groups (p <.005). The distribution of the data was negatively skewed for participants and multi-modal for nonparticipants. Levene's test was significant (p <.01), indicating heterogeneity of variances, so the researcher used a Welch ANOVA procedure. There was a significant difference in perceptions of ability and expectancy between music participants and nonparticipants, Welch's $F(1, 274.43) = 76.79$, $p < .001$. Participants reported significantly higher perceptions of their musical ability and expectations for success in music ($M = 21.07$, $SD = 4.09$) than nonparticipants ($M = 16.21$, $SD = 5.61$).

There were three outliers in the data for the task difficulty item, all of which represented values for nonparticipants that were higher than the rest of the group. Based on the rationale described at the beginning of this section, the researcher removed the outliers for the analysis. The data distributions were not normal for either group, as indicated by significant results for the Shapiro-Wilk tests ($p < .001$). The distribution of the data was multimodal for participants, with most of the data located on the lower end of the scale, and positively skewed for music nonparticipants. Levene's test was not significant ($p = .197$), indicating that the data met the homogeneity of variance assumption and the one-way ANOVA procedure was appropriate. There was a

significant difference in task difficulty mean scores for school music between music nonparticipants and participants, $F(1, 314) = 25.41$, $p < .001$. Nonparticipants reported significantly higher musical task difficulty ($M = 9.95$; $SD = 3.69$) than participants ($M = 8.01$; $SD = 3.16$). The results of the eta squared calculation revealed a medium effect size ($\eta^2 = .07$).

There were significant differences between school music participants and nonparticipants in their perceptions of, attitudes toward, and values for, school music and music outside of school. School music participants had much more positive attitudes toward school music than nonparticipants. Music participants reported higher perceptions of their musical abilities, greater expectations for their success in music, and lower difficulty for musical tasks when compared to students who did not enroll in music classes. While these results were not surprising, they suggest that students who possessed positive attitudes toward school music, believed strongly in their musical abilities, and viewed musical tasks as manageable were more inclined to participate in school music programs.

Involvement in music. Survey participants responded to items regarding their experiences and involvement with music inside and outside of school. School music participants reported all of the music courses in which they were currently enrolled: 98 students in choirs, 78 students in concert bands, 25 students in orchestra, and 13 students taking history of popular music course. Among instrumentalists, 41 played in jazz band, four took a jazz improvisation course, and five students played in an accelerated strings ensemble. Music participants spent an average of 7.07 hours per week ($SD = 18.31$) participating in school music.

Survey respondents reported all of the music courses they had previously taken in high school. Students enrolled in school music at the time of the study reported their previous enrollment in music: 79 played in band or jazz band, 21 played in orchestra, 82 sang in a choir, three took the history of popular music class, and 10 had not previously enrolled in a high school music course. The majority of school music nonparticipants (*n* = 88) had never taken a high school music course, 11 played in band or jazz band, three in orchestra, 17 sang in choir, and three took history of popular music. Students reported participating in music ensembles not offered at Oak Valley High School, including show choir for three music participants and one nonparticipant and mariachi band for one music participant. Respondents listed other musical activities in which they previously participated in high school, but for which they did not receive credit, such as marching band and solo and ensemble contests. Of the nonparticipants, 16 reported various ways that they participated in music at school, including membership in the marching band colorguard (*n* = 3), marching band (*n* = 1), trying out for the school musical (*n* = 1), and their previous elementary and middle school music classes (described below).

Survey respondents indicated the music classes in which they participated during their elementary school years. The majority of students participated in an elementary music class (*n* = 138 school music participants; *n* = 117 nonparticipants)[2], with 22 participants and 19 nonparticipants singing in elementary choirs that met outside of the general music class time. Instrumental music participation included beginning band (*n* = 97 school music participants; *n* = 46 nonparticipants) and beginning orchestra (*n* = 49

[2] The term "participant" refers to those students enrolled in school music during the study and the term "nonparticipant" refers to those students who were not participating in school music during the study.

school music participants; *n* = 25 nonparticipants). More school music nonparticipants than participants reported playing in world drum or steel drum ensembles (*n* = 5 nonparticipants; *n* = 1 school music participant) in elementary school. One student mentioned each of the following middle school musical activities: playing guitar, handbells, or singing in show choir; while 15 nonparticipants and eight participants reported taking no elementary music classes. One of these students communicated that there were no music classes offered at the elementary school she attended.

In middle school, choir was the most frequently reported music class (*n* = 109 school music participants; *n* = 62 nonparticipants), followed by band (*n* = 92 school music participants; *n* = 36 nonparticipants), middle school general music (*n* = 66 school music participants; *n* = 59 nonparticipants), and orchestra (*n* = 31 school music participants; *n* = 8 nonparticipants). Jazz band involved 28 music participants and seven nonparticipants, and four students from each group participated in show choir. Guitar club involved more nonparticipants (*n* = 3) than participants (*n* = 2), and the other activities reported by students included honors or auditioned choir ensembles (*n* = 6 school music participants) and school musicals (*n* = 1 school music participant, *n* = 1 nonparticipant) that were music activities not offered for credit. Of survey respondents, 41 school music nonparticipants and nine participants indicated not taking any music classes during middle school.

The researcher asked survey respondents whether they had learned to sing or play instruments with a school music teacher. The researcher asked survey respondents to report all of the instruments (including voice) they had learned to play at school with a

music teacher, with some students indicating more than one instrument.[3] Among current school music participants, 152 students reported learning a total of 154 instruments with a school music teacher, while 15 did not learn to play or sing at school. For nonparticipants, 109 students reported learning to sing or play 110 instruments, and 43 indicated they did not receive such instruction at school. Current music participants reported learning voice (n = 81), woodwinds (n = 78), strings (n = 53), concert percussion (n = 51), brass (n = 45), piano (n = 28), guitar/bass (n = 15), and drum set (n = 9). Nonparticipants reported learning woodwinds (n = 45), voice (n = 43), concert percussion (n = 31), strings (n = 30), guitar/bass (n = 29), piano (n = 27), brass (n = 18), and drum set (n = 9). Some students indicated other instruments not included on the survey that they learned to play at school, including recorder (n = 17) and keyboard (n = 2).

Survey respondents reported their grade in school when they started and stopped school musical instruction on these instruments. Overall, most students reported learning to sing during preschool through second grade (n = 78), with 13 learning to sing in grades 3-5, 26 in middle school, and only three in high school. Instruction on orchestral instruments for 16 students began before fourth grade, with 56 learning to play strings in grades 4 and 5, eight in middle school, and two in high school. Most wind and percussion students started in 4th and 5th grade (n = 164), with 17 beginning in grades K-3, 67 starting in middle school, and 14 in high school. The majority of string instrumentalists also started in late elementary (n = 56), with 16 students starting before fourth grade, eight in middle school, and two beginning in high school. Of piano students, 33 started learning to play in middle school, 20 in elementary school, and two in

[3] From this point forward in the report, the term *instruments* includes voice.

high school. Students most frequently reported starting to play guitar, bass, and drum set in middle school (n = 45), with nine students starting these instruments in elementary school and six during high school.

Many students indicated that they still sang or played these instruments at school, including 80 wind and percussion students, 18 string players, 63 vocalists, 37 wind and concert percussion students, and one electric bassist; these individuals constituted the participant group for the present study. Some students reported that they continued to sing or play these instruments, but not at school, including 10 singers, 15 piano players, nine guitar and bass students, six wind and percussion musicians, and three string players. However, the majority of students reported that they stopped singing or playing the instruments they learned with a school music teacher: 45 singers, 35 pianists, 166 wind and percussion instrumentalists, 60 string musicians, 32 guitar/bass players, and 11 drum set students. Most students who started learning to sing or to play instruments at school discontinued their musical study by the end of middle school (n = 201), followed by elementary school (n = 83), and high school (n = 65).

The researcher asked students to indicate the music making activities in which they participated outside of school from a list that included a variety of instrumental, vocal, technological, and creative musical activities. Among the respondents, 162 current school music participants and 83 nonparticipants reporting involvement in some sort of music making activities outside of school. The majority of school music nonparticipants reported no participation in music making activities outside of school (n = 65), with just 22 participants reporting no involvement in such activities. The most popular music making activities outside of school for both groups were singing alone (n = 109,

participants; n = 61, nonparticipants) or with friends (n = 68, participants; n = 44, nonparticipants), followed by playing instruments alone (n = 76, participants; n = 24, nonparticipants), and singing or playing in church groups (n = 49, participants; n = 16, nonparticipants). An equal number of school music participants reported playing instruments with friends or writing songs (n = 36 for each), with an additional 20 students creating music using technology or keyboards. Among nonparticipants, 13 reported writing songs, 11 created music with technology or keyboards, and 10 played instruments with friends. Community groups and garage bands involved more participants (n = 11 and 14, respectively) than nonparticipants (n = 1 and 5, respectively). The opposite was true for mobile DJs (plays pre-recorded music at an event) and hip-hop or electronica style DJs (creates music using computers, turntables, etc.), as eight nonparticipants and one participant indicated involvement in this type of music. Participation in family music groups was more common for participants (n = 9) than nonparticipants (n = 3). Respondents indicated their involvement in other music making activities outside of school not included on the survey, such as community theater musicals (n = 4), church handbell choirs (n = 2), and private lessons (n = 2). One student reported recording music in the father's studio "for fun" and another writing choral arrangements outside of school. The average amount of time spent each week in music making activities outside of school was 4.18 hours (SD = 7.39) for participants and 1.37 hours (SD = 2.96) for nonparticipants.

Students reported the instruments they had learned outside of school. School music participants (n = 124) reported studying more instruments outside of school than nonparticipants (n = 82). The most popular instrument learned outside of school for both

groups was piano (n = 65 participants; n = 38 nonparticipants) followed by voice (n = 8 participants; n = 30 nonparticipants). Among participants, 35 learned woodwind and brass instruments, 20 studied string instruments, and 11 pursued concert percussion outside of school. Fewer nonparticipants studied traditional concert band instruments, including 14 woodwind and brass instruments and 7 each for strings and concert percussion. Acoustic guitar was the most popular instrument among nonparticipants (n = 18) and the second most popular instrument for participants (n = 30). A nearly equal number of nonparticipants (n = 15) and participants (n = 14) learned to play drum set outside of school. More participants learned electric guitar (n = 18) and electric bass (n = 13) outside of school than nonparticipants (n = 5 for each instrument). Students from both groups also reported learning to play other instruments outside of school not included on the survey, such as handbells, ukulele, and recorder (n = 3 for each) and harmonica (n = 2). Respondents listed other instruments pursued outside of school, including organ, hand drum, and melodica by participants, and tone chimes and accordion by nonparticipants.

Students indicated when they started and stopped learning to play these instruments outside of school. Most students reported starting studying these instruments either before or during elementary school, with 65 students learning to sing, 53 playing piano, 30 learning wind and percussion instruments, and 19 playing string instruments. The number of students who began learning to play these instruments outside of school decreased during middle and high school. In middle school, 29 pianists, 21 wind and percussion students, 15 singers, and five string musicians learned to play instruments outside of school. During high school, 20 pianists, 15 wind instrumentalists and

percussionists, four vocalists, and two string instrumentalists started playing instruments outside of school. However, more students learned guitar, bass, and drum set in middle school, with 32 students on electric and acoustic guitar, 14 on drum set, and nine on electric bass. In high school, an additional 26 students started learning guitar, seven started bass, and four began studying drum set. Only 12 students started guitar or bass and 11 began learning drum set outside of school during their elementary years.

The majority of students who learned to play instruments outside of school were still playing, including 60 singers, 52 guitarists and bassists, 45 pianists, 37 wind and concert percussion instrumentalists, 18 drum set musicians, and 10 string players. In middle school, 22 students stopped playing piano, 16 discontinued wind and percussion instruments, eight ceased playing string instruments, eight stopped playing guitar, seven stopped singing, and six quit playing drum set. Students reported discontinuing the following instruments during high school: piano (n = 22), guitar (n = 14), electric bass (n = 2),wind and percussion (n = 7), string instruments (n = 3), and drum set (n = 3). Fewer students stopped singing or playing these instruments in elementary school: piano (n = 11), wind instruments (n = 4), string instruments (n = 3), voice (n = 2), drum set (n = 1), and electric guitar (n = 1).

Research Question 2

How do nonparticipating students' perceptions of music inside and outside of school influence their participation in musical activities?

Perceived task values for music inside and outside of school. The researcher used the Perceived Task Values scale to measure student perceptions regarding the extrinsic utility (i.e., usefulness), intrinsic interest (i.e., interest), and attainment

value/importance (i.e., importance) for music inside and outside of school. Scale reliabilities for each of the separate scales are reported in Table 6. As previously discussed regarding the first research question, outliers existed in the data for all of the expectancy/value scales, including those for perceived task values. As was the case for the ability/expectancy scale, the outliers existed among school music participants and were below the means for the rest of the group. Because these outliers had the effect of lowering the overall group mean, their presence decreased the difference in the means between groups. As a result, retaining the outliers resulted in a more conservative statistical analysis than if they had been removed. As a result, the researcher decided to retain the outliers in the analyses.

The researcher conducted one-way between-groups ANOVAs to compare the means for school music participants and nonparticipants on the three subscales (e.g., Extrinsic Utility Value, Intrinsic Interest Value, and Attainment Value/Importance) within the Perceived Task Values scale. The researcher explored the usefulness of music as a general construct, as well as the usefulness of music inside and outside of school between school music participants and nonparticipants. In the analysis, the researcher used the summed score for the Extrinsic Utility Value (i.e., usefulness) scale for three scale items and compared the means for music inside and outside of school on one scale item each.

Usefulness of music. The data distributions were not normal for either group, as indicated by significant results for the Shapiro-Wilk tests ($p = .01$). The distribution of the data was negatively skewed for participants and multimodal for nonparticipants. Levene's test was significant ($p = .01$), indicating that the data violated the equal

variances assumption, so the researcher conducted a Welch ANOVA. There was a significant difference between the means for usefulness of music between music participants and nonparticipants, Welch's $F(1, 297.86) = 42.66$, $p < .001$. Participants ($M = 14.12$, $SD = 4.29$) reported significantly higher mean scores for usefulness of music than nonparticipants ($M = 10.68$, $SD = 5.04$).

Usefulness of music inside and outside of school. The researcher compared the usefulness of music inside and outside of school between school music participants and nonparticipants. The data distributions were not normal for either group in both sets of data, as indicated by significant results for the Shapiro-Wilk tests ($p < .001$). Data distributions for participants were negatively skewed for both music inside of school and for music outside of school, while nonparticipant scores were positively skewed for music in school and bimodal for music outside of school. There were four outliers among music participants, all of which were lower than the rest of the group, that were retained in the analysis. Levene's test was significant ($p = .001$), so the researcher conducted a Welch ANOVA. There was a significant difference in the perceived usefulness for school music between participants and nonparticipants, Welch's $F(1, 293.28) = 138.23$, $p < .001$. Participants reported significantly higher usefulness of school music ($M = 5.39$, $SD = 1.44$) than nonparticipants ($M = 3.28$, $SD = 1.74$). There was a significant difference in the usefulness of music outside of school between participants and nonparticipants, Welch's $F(1, 303.47) = 61.45$, $p < .001$. Participants reported significantly higher usefulness for music outside of school ($M = 5.10$, $SD = 1.71$) than nonparticipants ($M = 3.49$, $SD = 1.92$).

Interest in music inside and outside of school. The researcher compared intrinsic interest (i.e., interest) in music inside and outside of school between school music participants and nonparticipants using the summed total of the individual Intrisic Interest Value scale items. The data distributions were not normal for either group, as indicated by significant results for the Shapiro-Wilk tests ($p < .001$). The distribution of the data for school music was negatively skewed for participants and positively skewed for nonparticipants. There were three outliers among music participants, all of which were lower than the rest of the group, that were retained in the analysis. Levene's test was significant ($p < .01$), so the researcher conducted a Welch ANOVA. There was a significant difference in the interest in school music between participants and nonparticipants, Welch's $F(1, 282.75) = 231.60$, $p < .001$. Participants had significantly higher interest in school music ($M = 11.19$, $SD = 2.58$) than nonparticipants ($M = 6.05$, $SD = 3.36$). There were no outliers in either group for the data regarding interest in music outside of school. The distribution for the data for participants was negatively skewed and the distribution for nonparticipants was multimodal and asymmetric. Levene's test was not significant ($p = .098$), so the data did not violate the assumption of homogeneity of variance. There was a significant difference in interest in music outside of school between participants and nonparticipants, $F(1, 317) = 44.34$, $p < .001$. Participants reported significantly higher interest in music outside of school ($M = 10.34$, $SD = 3.36$) than nonparticipants ($M = 7.68$, $SD = 3.75$). The results of the eta squared calculation revealed a medium effect size ($\eta^2 = .12$).

Importance of music inside and outside of school. The researcher compared the attainment value and importance for music (i.e., importance) inside and outside of school

between school music participants and nonparticipants using the summed total of the individual Attainment Value/Importance scale items. The data distributions were not normal for either group, as indicated by significant results for the Shapiro-Wilk tests ($p < .001$). The distribution of the data for school music was negatively skewed for participants and multimodal and asymmetric for nonparticipants. There were nine outliers among music participants, all of which were lower than the rest of the group, that were retained in the analysis. Levene's test was significant ($p < .002$), so the researcher conducted a Welch ANOVA. There was a significant difference in the importance of school music between participants and nonparticipants, Welch's $F(1, 291.46) = 159.69$, $p < .001$. Participants reported higher values for the importance for school music ($M = 16.53$, $SD = 3.97$) than nonparticipants ($M = 10.24$, $SD = 4.81$). The distribution of the data for music outside of school was negatively skewed for participants and multimodal and positively skewed for nonparticipants. Levene's test was not significant ($p = .091$), so the data did not violate the assumption of homogeneity of variance. There was a significant difference in the importance of music outside of school between participants and nonparticipants, $F(1, 316) = 64.84$, $p < .001$. Participants reported higher values for the importance of music outside of school ($M = 15.35$, $SD = 4.74$) than nonparticipants ($M = 10.83$, $SD = 5.27$). The results of the eta squared calculation revealed a medium effect size ($\eta^2 = .17$).

There were significant differences in the perceived usefulness of, interest in, and importance of music inside and outside of school between groups. School music participants reported higher values for usefulness, interest, and importance for both school music and music outside of school than nonparticipants. However, there was a

greater difference between groups in the mean scores regarding school music, suggesting that students who find school music to be useful, interesting, and important were more likely to enroll in music courses at school. Nonparticipants had higher mean scores for the value of music outside of school than for music inside of school, yet only a little more than half of these students (54.6%) reported participating in music making activities (e.g., playing an instrument, singing with friends, or creating music with technology) outside of their school music programs. School music participants possessed higher values in each of the three constructs within perceived task values (i.e., usefulness, interest, and importance) than nonparticipants, who valued music outside of school more than music inside of school.

Participation in music outside of school. Nonparticipation in school music programs is not necessarily an indication that a student is not musical. Over half (54.6%) of school music nonparticipants reported learning to play an instrument or sing outside of school, yet 43.9% indicated they did not currently participate in any music making activities outside of school. To compare values for music outside of school between school music nonparticipants involved in music making outside of school and those who were not, the researcher conducted a one-way, between-groups ANOVA using the total scores for the Perceived Task Values scale for music outside of school. There were no outliers, but the data were not normally distributed, as assessed by a Shapiro-Wilk test (p = .03). The data distribution was bimodal for students who participated in music outside of school and was positively skewed for those who did not report participating in music outside of school. The results of Levene's test (p = .03), revealed the assumption of equal variances was not met so the researcher conducted a Welch ANOVA. There was a

significant difference in perceived value for music outside of school between groups, Welch's $F(1, 114.921) = 23.84$, $p < .001$. Students who participated in music making activities outside of school had significantly higher values for these activities ($M = 37.60$, $SD = 14.53$) than students who did not participate in them ($M = 27.14$, $SD = 11.45$).

These results regarding perceived musical task values inside and outside of school revealed that students who reported higher values for music were more likely to participate in music in the context where their musical values were higher. School music nonparticipants who found music outside of school to be useful, interesting, and important were more likely to engage in music making activities outside of school. In response to a survey item regarding possible changes to school music programs, 62.7% of school music nonparticipants indicated they would enroll in a music course at school if one were offered in a style of music that interested them outside of school. Taken together, these results suggest that it might not be lack of interest that leads to school music nonparticipation but lack of interest in the music courses offered at school. Based on these results, the researcher failed to reject the hypothesis that that student perceptions regarding the interest, importance, and utility (e.g., subjective task values) of music inside school were different from those for music outside of school (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010).

Research Question 3

What barriers and other factors contribute to student nonparticipation in secondary school music programs?

Constraint means. School music nonparticipants reported higher levels of constraint than participants on each of the individual constraint items. For these items, a

score of one indicated the lowest level of constraint and a score of seven indicated the highest level of constraint. A side-by-side comparison of the mean scores between groups for each constraint item is provided in Table 7.

Constraint means for school music nonparticipants ranged from 1.87 (*SD* = 1.40) to 4.33 (*SD* = 1.99), indicating a low to medium level of constraint. Constraint items, arranged in descending order of mean scores for nonparticipants, are displayed in Table 8. The top seven constraints, all had means above 4.0. The lowest constraint – the only item with a mean score below 2.0 – was "parents won't let me." In the nonparticipant group, the majority of items (21 of 33) had mean scores between 3.0 and 4.0. Constraint means for school music participants were lower overall than those for nonparticipants, from 1.45 (*SD* = 1.12) to 3.02 (*SD* = 1.96*)*, representing a low level of constraint. A summary of the constraint means for participants, organized by descending order of mean scores, is presented in Table 9. Only the highest constraint had a mean score above 3.0, "no time to practice outside of school." The lowest constraint for participants was "parents won't let me." Exactly two-thirds of all constraint items (22) had mean scores between 2.0 and 3.02.

The exploration of the constraint means revealed some interesting trends. Though not surprising, school music nonparticipants reported higher levels of constraint related to school music participation than students currently enrolled in music courses. Students in both groups reported four shared constraints among the top seven for each group. These constraints included the following: belief that they possessed more ability in other activities, pursued interests other than music, had limited time for musical practice outside of school, and preferred taking other classes they found more interesting. While

Table 7

School Music Participants' and Nonparticipants' Mean Scores for Constraints to School Music

	School music participants		School music nonparticipants	
Constraint	*M*	*SD*	*M*	*SD*
Cost	2.47	1.85	3.07	1.94
Transportation issues	2.36	1.68	3.03	2.06
Lack of skills/not talented	2.23	1.47	3.48	1.96
Lack of interest	1.95	1.40	3.91	1.98
Not musical or creative	1.92	1.32	3.11	1.87
Don't like to perform	2.20	1.59	3.54	2.08
Pursuing other interests	2.71	1.66	4.33	1.99
More talented in another activity	2.42	1.70	4.07	1.95
No time to practice outside of school	3.02	1.96	4.05	2.10
Can't do before/after school music activities	2.57	1.70	3.86	2.19
Lost interest	2.12	1.46	4.07	1.99
Don't like the school music teacher	1.79	1.23	2.91	1.95
Parents won't let me	1.45	1.12	1.87	1.40
Friends not involved or dropped out	2.39	1.69	2.98	1.77
Family commitments	2.37	1.50	2.58	1.87
Work commitments	2.45	1.74	2.96	1.90
Don't know anyone else in music	1.83	1.40	3.41	2.13
Don't fit in with the music crowd	1.88	1.33	3.50	1.98
Participate in sports or other activities	2.70	1.91	3.88	2.29
Family not supportive of musical participation	1.67	1.33	2.11	1.63
Friends not supportive of musical participation	2.00	1.56	2.20	1.52
Not a cool activity to be in	1.62	1.16	2.86	1.95
Wanted to take other classes that	2.52	1.61	4.26	2.06

were more interesting to me				
Needed to take other classes to graduate	2.46	1.80	3.67	2.10
Have been told that I am not good at music	2.21	1.60	2.84	1.82
No opportunities for me to join music when I was ready	1.84	1.37	2.73	1.82
Music events are scheduled at the same time as other activities or sports I do	2.68	1.85	3.54	2.06
Could not get an instrument	1.98	1.60	2.93	2.01
Not interested in the music classes offered	1.90	1.38	4.12	1.90
Dislike the music we learn at school	2.31	1.38	4.10	2.00
I learn better in an individual setting than a group setting	2.49	1.64	3.05	1.95
Teacher makes all the decisions, no student input	2.37	1.56	3.47	2.00
Would rather create my own music than play/sing someone else's	2.14	1.61	2.95	1.86

Table 8

Rank-Ordered List of School Music Constraint Means for School Music Nonparticipants

Constraint	*M*	*SD*
Pursuing other interests	4.33	1.99
Wanted to take other classes that were more interesting to me	4.26	2.06
Not interested in the music classes offered	4.12	1.90
Dislike the music we learn at school	4.10	2.00
More talented in another activity	4.07	1.95
Lost interest	4.07	1.99
No time to practice outside of school	4.05	2.10
Lack of interest	3.91	1.98
Participate in sports or other activities	3.88	2.29
Can't do before/after school music activities	3.86	2.19
Needed to take other classes to graduate	3.67	2.10
Don't like to perform	3.54	2.08
Music events are scheduled at the same time as other activities or sports I do	3.54	2.06
Don't fit in with the music crowd	3.50	1.98
Lack of skills/not talented	3.48	1.96
Teacher makes all the decisions, no student input	3.47	2.00
Don't know anyone else in music	3.41	2.13
Not musical or creative	3.11	1.87
Cost	3.07	1.94
I learn better in an individual setting than a group setting	3.05	1.95
Transportation issues	3.03	2.06
Friends not involved or dropped out	2.98	1.77
Work commitments	2.96	1.90
Would rather create my own music than play/sing someone else's	2.95	1.86
Could not get an instrument	2.93	2.01
Don't like the school music teacher	2.91	1.95

Not a cool activity to be in	2.86	1.95
Have been told that I am not good at music	2.84	1.82
No opportunities for me to join music when I was ready	2.73	1.82
Family commitments	2.58	1.87
Friends not supportive of musical participation	2.20	1.52
Family not supportive of musical participation *	2.11	1.63
Parents won't let me *	1.87	1.40

Note: * Items for which outliers existed in the data set.

Table 9

Rank-Ordered List of School Music Constraint Means for School Music Participants

Constraint	*M*	*SD*
No time to practice outside of school	3.02	1.96
Pursuing other interests	2.71	1.66
Participate in sports or other activities	2.70	1.91
Music events are scheduled at the same time as other activities or sports I do	2.68	1.85
Can't do before/after school music activities	2.57	1.70
Wanted to take other classes that were more interesting to me	2.52	1.61
I learn better in an individual setting than a group setting	2.49	1.64
Cost	2.47	1.85
Needed to take other classes to graduate	2.46	1.80
Work commitments	2.45	1.74
More talented in another activity	2.42	1.70
Friends not involved or dropped out *	2.39	1.69
Family commitments *	2.37	1.50
Teacher makes all the decisions, no student input *	2.37	1.56
Transportation issues *	2.36	1.68
Dislike the music we learn at school *	2.31	1.38
Lack of skills/not talented *	2.23	1.47
Have been told that I am not good at music *	2.21	1.60
Don't like to perform *	2.20	1.59
Would rather create my own music than play/sing someone else's *	2.14	1.61
Lost interest *	2.12	1.46
Friends not supportive of musical participation *	2.00	1.56
Could not get an instrument *	1.98	1.60
Lack of interest *	1.95	1.40
Not musical or creative *	1.92	1.32
Not interested in the music classes offered *	1.90	1.38

Don’t fit in with the music crowd *	1.88	1.33
No opportunities for me to join music when I was ready *	1.84	1.37
Don’t know anyone else in music *	1.83	1.40
Don’t like the school music teacher *	1.79	1.23
Family not supportive of musical participation *	1.67	1.33
Not a cool activity to be in *	1.62	1.16
Parents won’t let me *	1.45	1.12

Note: * Items for which outliers existed in the data set.

the mean score for the cost of participation was higher for music nonparticipants (M = 3.11, SD = 2.06) than nonparticipants (M = 2.47, SD = 1.85), it ranked much higher among ordered means for music participants (8^{th}) in comparison to nonparticipants (19^{th}).

The standard deviations for each constraint item revealed a wider distribution of scores among music nonparticipants than participants. All but one of the standard deviations were larger for nonparticipants than participants, indicating a wider range of scores among nonparticipants than participants. The exception was the standard deviation for the item "friends not supportive of musical participation" (music participants, SD = 1.56; nonparticipants, SD =1.52), where music participants had a wider range of scores than nonparticipants. The wider range of scores for constraint experiences among school music nonparticipants suggested that their individual constraint experiences varied more widely than those reported by participants. However, despite the narrower standard deviations for participants, the researcher made a surprising discovery upon examining the data distributions for each constraint item.

A number of outliers existed among school music participants whose constraint scores were much higher than those of the rest of the group. While the researcher expected to encounter such outliers in the nonparticipant group, the greatest number of outliers of this kind existed among school music participants. These outliers represented students who experienced high levels of constraint yet still participated in music at school.

Outliers in the school music participant group existed in the responses to 22 of the 33 constraint statements, with as few as two and as many as 39 participants reporting high levels of constraint that made them outliers or significant outliers, as identified in

the box plots in SPSS. Box plots provide a graphic representation of a distribution of data where the middle half of the data is represented by a box (Figure 7). The range of data is indicated by lines extending below the box to the lowest reported value and above the box to the highest reported value that are not considered to be unusual, or outliers.

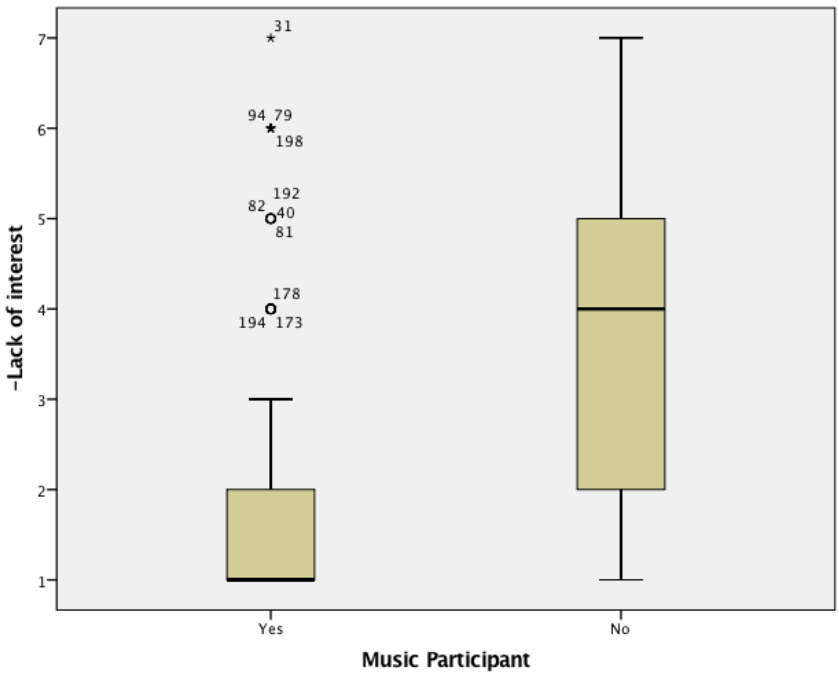

Figure 7. Example of box plot for the school music constraint item, "Lack of interest." o = outlier; * = significant outlier

Outliers are those data points located more than 1.5 box lengths away from the edge of the box, indicated by a circle. Significant outliers, considered to be even more unusual, are those data points located more than three box lengths away from the edge of the box, indicated by an asterisks. Items for which outliers existed in the data set are marked in the rank-ordered list of constraint means for school music participants (Table 9).

There were fewer outliers in the data for nonparticipants. These outliers were located above the group means, indicating a higher level of constraint experience than other nonparticipants. The items for which outliers existed in the data are marked in the rank-ordered list of constraint means for school music nonparticipants (Table 8).

Principal components analysis on school music constraint items. The researcher conducted a principal components analysis (PCA) to reduce the list of 33 items to a smaller number of components for further analysis and for inclusion in the logistic regression model. Because the purpose of the PCA was to identify a smaller number of components into which the various scale items grouped and not to test for significance, the researcher decided to retain the outliers in the analysis. This decision allowed the researcher to find a solution that represented the data as reported by study participants and included all of the data collected through the survey.

The researcher established the criterion for evaluating the correlation coefficients at .30, based on the recommendations of Pallant (2010) and Leech (2012). An examination of the correlation matrix indicated many coefficients of .30 and above and all 33 variables correlated with at least one other item where $r > .30$. The Kaiser-Meyer-Olkin (KMO) test was .919 – "marvelous," according to Kaiser's (1974) classification of measure values – exceeding the recommended threshold value of .60. Bartlett's Test of Sphericity was significant, $\chi^2 (528) = 5{,}092.98$, $p < .001$, indicating that the items were correlated (i.e., the correlation matrix was not an identity matrix). The individual measures of sampling adequacy for the individual items were all greater than .8 – "meritorious" on Kaiser's scale – as assessed by the diagonals on the anti-image correlation matrix. The communalities were all above .3 (Table 10), confirming that each

item shared some common variance with other items. These measures suggested that the data were suitable for factor analysis and the correlation matrix was factorable. As a result of these determinations, the researcher conducted the PCA with all 33 items. Using Kaiser's criterion (Kaiser, 1960), the researcher identified six components with initial eigenvalues higher than one that explained 60.34% of the total variance. The eigenvalues indicated that the first component explained 34% of the variance, the second component explained 9% of the variance, the third component explained 6% of the variance, the fourth and fifth factors explained 4% of the variance each, and the sixth factor explained 3% of the variance. There was not an obvious break in the scree plot (Cattell, 1966), but the researcher identified slight inflection points that suggested a two-, three-, or six-factor solution (Figure 8). The researcher conducted a Horn's parallel analysis to further explore the factor structure using the Monte Carlo PCA for Parallel Analysis (Watkins, 2000) to generate 100 randomized data sets of the same size (i.e., 33 items and 319 participants). In comparing the eigenvalues obtained in both data sets, the researcher retained those factors with eigenvalues larger than 1 in the original data set, resulting in four factors.

The researcher used both direct oblimin and varimax rotations for the initial analysis (Pallant, 2010). There was very little difference in the initial solutions between rotations, although the direct olbimin rotation exhibited a simpler structure (Thurstone, 1947) based on the number of items that loaded on only one component. The researcher

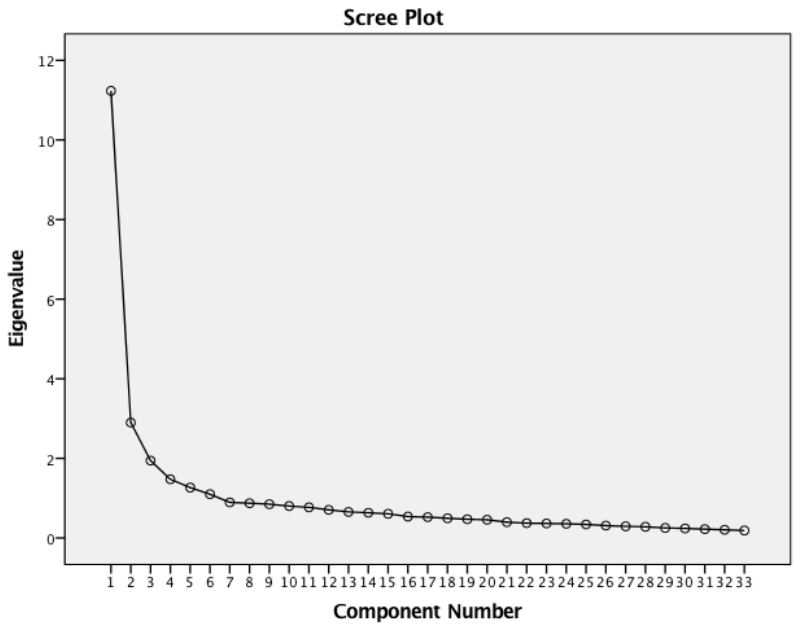

Figure 8. Scree plot of school music constraint items.

set the threshold for component loadings at .40, based on the recommendations of Field (2013), Leech (2012), and Pett, Lackey, and Sullivan (2003). In the varimax rotation, the researcher identified the following loadings above the established threshold: 13 items loaded on only one component, 18 items loaded on two components, and three items loaded on three components. Using the same guideline of .40, the researcher examined the direct oblimin rotation and discovered 19 items loaded strongly on one component (two of the values were negative), 13 items loaded strongly on two components (five of which were negative values), and one item loaded strongly on three components. The negative factor loadings identified in this initial stage of the analysis disappeared as items were removed and the researcher forced the number of components to examine various solutions as the analysis progressed.

The researcher examined the component correlation matrix to determine the strength of the relationships between components. Each component correlated with at least one other component at $r = \pm .30$. As a result, the researcher continued to explore solutions using direct oblimin rotation as an oblique technique that assumes correlations exist between factors. After rotation, an inspection of the factor structure matrix for the six-factor solution revealed all of the items loaded at or above .40 on at least one component (Table 10). The examination of the rotated pattern matrix for the six-factor solution revealed the factor loadings above .40 included: nine items on the first component, six items on the second component, seven items on the third component, three items on the fourth component, seven items on the fifth component, and five items with negative values on the sixth component (Table 11). These results supported a six-factor solution. Based on these results, the researcher decided to explore three-, four-, five-, and six-factor solutions.

In analyzing each of the solutions, the researcher examined the total variance explained by each solution and the communalities for each item. The researcher also compared the component pattern matrices and the item loadings for evidence of simple versus complex structure for each of the solutions under consideration. In addition to balancing the need to explain as much of the variance as possible with as few components as possible, the researcher also sought a solution in which the statistical procedure grouped items appropriately. The researcher also wanted to retain as many items as possible from the original scale for two reasons. First, the differences in mean scores between music participants and nonparticipants suggested that school music

Table 10

Structure Matrix and Communalities for PCA with Direct Oblimin Rotation of Initial Six-Factor Solution of 33 School Music Constraint Items

Item	Structure Matrix						Commu-nalities
	Component						
	1	2	3	4	5	6	
Lack of interest	**.799**	.025	.403	.272	**.435**	-.256	**.700**
Lack of skills/not talented	**.789**	.341	.176	.135	.336	-.318	**.682**
Lost interest	**.745**	-.032	**.464**	.297	**.450**	-.235	**.678**
Not musical or creative	**.743**	.328	.134	.233	.322	-.214	**.614**
Not interested in the music classes offered	**.677**	.108	**.414**	.138	**.636**	-.106	**.655**
Wanted to take other classes that were more interesting to me	**.662**	.082	**.618**	.048	**.425**	-.123	**.666**
Don't fit in with the music crowd	**.643**	.286	.321	.395	**.616**	-.323	**.614**
Don't like to perform	**.624**	.124	.222	.183	**.422**	**-.463**	**.512**
Don't know anyone else in music	**.550**	.302	.159	**.432**	**.531**	-.323	**.522**
Family not supportive of musical participation	.260	**.796**	.128	**.409**	.305	-.348	**.717**
Parents won't let me	.172	**.747**	.156	.216	.188	-.321	**.575**
Family commitments	.185	**.642**	.236	.274	.211	**.450**	**.509**
Have been told I am not good at music	**.486**	**.519**	.146	.252	.259	-.326	**.450**
Participate in sports or other activities	.180	.134	**.813**	.257	.193	-.016	**.705**
Music events are scheduled at the same time as other activities or sports I do	.125	.213	**.790**	.334	.355	-.199	**.716**

More talented in another activity	**.532**	.075	**.697**	.209	**.480**	-.110	**.639**
No time to practice outside of school	.341	.157	**.690**	.275	.273	**-.538**	**.670**
Pursuing other interests	**.554**	.073	**.647**	.154	.348	-.350	**.596**
Needed to take other classes to graduate	.380	**.444**	**.467**	-.105	**.456**	-.225	**.572**
Friends not supportive of musical participation	.131	.340	.260	**.811**	.208	-.203	**.709**
Friends not involved or dropped out	.333	.260	.289	**.729**	**.459**	-.218	**.632**
Not a cool activity to be in	**.523**	.060	.381	**.633**	**.458**	-.193	**.627**
Dislike the music we learn at school	**.518**	.072	.369	.226	**.752**	-.184	**.639**
Teacher makes all the decisions, no student input	.276	.353	.172	.302	**.749**	-.299	**.620**
Would rather create my own music than play/ sing someone else's	.270	.096	.205	.137	**.669**	-.235	**.456**
No opportunities for me to join music when I was ready	.279	**.608**	.202	.182	**.610**	-.351	**.616**
Don't like the school music teacher	.374	.158	.308	.280	**.583**	-.212	.385
I learn better in an individual setting than a group setting	.226	.168	.230	.303	**.560**	-.356	.384
Transportation issues	.211	.346	.120	.165	.310	**-.811**	**.675**
Cost	.227	**.420**	.013	.133	.313	**-.764**	**.647**
Could not get an instrument	.322	.619	.131	.138	**.416**	**-.657**	**.663**
Can't do before/after school music activities	.330	.143	**.571**	.331	.337	**-.600**	**.616**
Work commitments	**.442**	.392	.336	.285	.184	**-.484**	**.451**

Note: Item loadings > .40 are bolded.

Table 11

Pattern Matrix for PCA with Direct Oblimin Rotation of Initial Six-Factor Solution of 33 School Music Constraint Items

Items	Pattern Matrix					
	Component					
	1	2	3	4	5	6
Lack of skills/not talented	**.777**	.205	.080	-.048	-.021	-.083
Not musical or creative	**.743**	.214	-.124	.085	-.009	.038
Lack of interest	**.711**	-.162	.137	.102	.087	-.062
Lost interest	**.624**	-.221	.215	.132	.122	-.054
Wanted to take other classes that were more interesting to me	**.516**	-.013	.465	-.161	.133	.085
Don't like to perform	**.502**	-.099	-.028	.007	.148	-.331
Not interested in the music classes offered	**.494**	-.021	.167	-.067	.438	.146
Don't fit in with the music crowd	**.422**	.088	.027	.196	.351	-.047
Don't know anyone else in it	.373	.110	-.128	.278	.301	-.076
Family not supportive of musical participation	.068	**.717**	-.028	.248	.062	-.033
Parents won't let me	.012	**.712**	.077	.060	-.026	-.067
Family commitments	-.018	**.541**	.144	.108	-.033	.240
Have been told I am not good at music	.404	**.417**	-.037	.097	-.035	-.083
Needed to take other classes to graduate	.148	.397	.377	-.352	.285	.013
Participate in sports or other activities	-.065	.115	**.839**	.118	-.045	.158
Music events are scheduled at the same time as other activities or sports I do	-.233	.121	**.772**	.157	0.15	-.016
No time to practice outside of school	.062	-.047	**.606**	.074	.064	-.439
More talented in another activity	.297	-.033	**.557**	.011	.220	.110
Pursuing other interests	.360	-.091	**.513**	-.050	.015	-.209
Friends not supportive of musical participation	-.074	.212	.117	**.771**	-.027	.015
Friends not involved or dropped out	.085	.084	.057	**.632**	.242	.034

Not a cool activity to be in	.331	-.134	.128	**.527**	.186	.024
Teacher makes all the decisions, no student input	-.068	.180	-.072	.110	**.721**	-.049
Would rather create my own music than play/sing someone else's	-.019	-.066	.005	-.029	**.674**	-.082
Dislike the music we learn at school	.234	-.106	.109	.027	**.647**	.041
No opportunities for me to join music when I was ready	-.027	.490	.014	-.042	**.505**	-.065
I learn better in an individual setting than a group setting	-.071	-.025	.040	.151	**.488**	-.212
Don't like the school music teacher	.118	.004	.102	.118	**.469**	-.011
Transportation issues	-.028	.080	-.036	-.019	.109	**-.772**
Cost	.022	.180	-.157	-.044	.133	**-.698**
Can't do before/after school music activities	.038	-.101	.443	.139	.035	**-.512**
Could not get an instrument	.082	.431	-.050	-.089	.199	**-.466**
Work commitments	.312	.234	.193	.120	-.172	-.319

Note: Item loadings > .40 are bolded.

nonparticipants might encounter entirely different constraints than students who participated in school music, in addition to experiencing the same constraints at significantly different levels. Second, the analysis for the pilot test data revealed significant differences between school music participants and nonparticipants for approximately half of the constraint statements.

The researcher performed PCA with direct oblimin rotation on the three-, four-, five-, and six-factor solutions. The six-factor model explained 60.34% of the variance, five-factor model explained 57.01% of the variance, the four-factor model explained 53.18% of the variance, and the three-factor model explained 48.71% of the variance. Communalities for the five- and six-factor models were all above .30, but there were two items below .30 in the four- and three-factor models, indicating these items did not share common variance with any of the other constraint items. These values provide information regarding the amount of variance is explained in each item. Values below .30 suggest that the item might not fit well with the other items in its component (Pallant, 2010).

The researcher studied the component pattern matrices to determine the simplicity or complexity of the structures using .40 as the guideline. The three-factor model had the most instances of primary loadings, in which 28 items loaded above the threshold on only one component. The five-factor model had 27 items, the four-factor model had 26 items, and the six-factor model had items that loaded on only one component. The three-factor model had the fewest instances of complex structure, as only one item loaded above the established threshold on two components. The four- factor model had three items that

loaded on two components, the five-factor model had four items that loaded on two components, and the six-factor model had seven items that loaded on two components.

The researcher also considered the number of items with loadings below .40 that would need to be eliminated. For the five-factor model, there were two items, for both the three- and four- factor models there were four items, and for the six-factor model there were three items that would be eliminated. However, in the three-factor model, three of these items had loadings below .30. Only one of the items with a low factor loading was common to all three models, "Needed to take other classes to graduate."

In examining the relationships between items within each component for each solution, the researcher found the six- and five-factor solutions to have the most conceptually clear grouping of items. This included one component that contained all but one of the constraint items specifically related to school music program structures. The components for the five- and six-factor solutions contained similar item groupings, but the five-factor model exhibited more evidence of simple structure, as no items loaded on more than one component above .40. For both the three- and four-factor solutions, items loaded onto components that made it more difficult to discern the relationship between items. In these cases, the conceptual connection was so broad that it did little to describe the characteristics of the items within the component. While there appeared to be some evidence that the three-factor solution grouped items as described in previous leisure sociology literature (i.e., intrapersonal, interpersonal, and structural constraints), it only explained 49% of the variance. After weighing these options, the researcher selected the five-factor solution for the amount of variance it explained, the number of primary component loadings, the fewest items with weak loadings, and the evident conceptual

structure underlying each component. The pattern and structure matrices for the three- and four-factor solutions are included in Appendices Q, R, S, and T.

Upon selecting the five-factor model, the researcher removed four items that loaded below the .40 threshold. The researcher first removed the items "needed to take other classes to graduate" and "work commitments." An analysis of the remaining 31 items revealed a third item for removal, "not a cool activity to be in." The subsequent analysis of the 30-item scale resulted in the removal of "don't know anyone else in music." After narrowing the scale to 29 items, an examination of the correlation matrix revealed that all items correlated above .30 with at least five other items in the matrix and there were no inter-item correlations greater than $r = .80$. The structure matrix and communalities and the pattern matrix for the five-factor solution are included in Tables 12 and 13.

A principal components analysis of the remaining 29 constraint items explained 59.24% of the variance. The individual contributions of each component to the variance were as follows: component one (34.04%), component two (9.78%), component three (6.56%), component four (4.69%), and component five (4.17%). After a direct oblimin rotation, the rotated solution indicated a simple structure (Thurstone, 1947), as all of the items had a primary loading of .40 or higher and there were no items that loaded onto more than one component. The pattern and structure matrices and communalities for this final solution are presented in Tables 12 and 13. All correlations between items were positive and small to moderate in strength, ranging from .077 to .449 (Appendices U, V, and W).

Table 12

Structure Matrix and Communalitites for PCA with Direct Oblimin Rotation of Five-Factor Solution of 29 School Music Constraint Items

Item	Structure Coefficients Components					Communalities
	Personal Perceptions	Financial and Transportation	Conflicting Activities	School Music Structures	Social Support	
Lack of interest	**.809**	.126	**.418**	**.458**	.078	**.696**
Lack of skills/not talented	**.801**	.321	.161	.333	.257	**.687**
Lost interest	**.755**	.080	**.491**	**.482**	.048	**.669**
Not musical or creative	**.748**	.209	.123	.339	.310	**.619**
Not interested in the music classes offered	**.696**	.059	.389	**.615**	.077	**.634**
Wanted to take other classes that were more interesting to me	**.669**	.062	**.571**	**.406**	.006	**.613**
Don't fit in with the music crowd	**.652**	.286	.351	**.609**	.317	**.580**
Don't like to perform	**.635**	.392	.262	**.421**	.083	**.496**
Have been told I am not good at music	**.505**	.342	.128	.294	**.492**	**.453**
Cost	.254	**.793**	.085	.315	.282	**.650**
Transportation issues	.241	**.777**	.206	.320	.248	**.635**

Could not get an instrument	.347	**.735**	.157	**.413**	**.438**	**.648**
Participate in sports or other activities	.204	-.086	**.801**	.217	.229	**.697**
Music events are scheduled at the same time as other activities or sports I do	.160	.083	**.798**	.394	.309	**.710**
No time to practice outside of school	.356	.370	**.731**	.333	.176	**.638**
More talented in another activity	**.551**	.016	**.681**	**.478**	.099	**.621**
Pursuing other interests	**.572**	.233	**.653**	.368	.048	**.599**
Can't do before/after school music activities	.343	**.441**	**.642**	.388	.175	**.577**
Teacher makes all the decisions, no student input	.303	.293	.178	**.768**	.351	**.638**
Dislike the music we learn at school	**.536**	.090	.373	**.763**	.090	**.655**
Would rather create my own music than play/sing someone else's	.307	.181	.208	**.671**	.093	**.459**
Don't like the school music teacher	.385	.160	.318	**.619**	.180	**.405**
I learn better in an individual setting than a group setting	.244	.274	.272	**.597**	.212	.384
No opportunities for me to join music when I was ready	.310	**.469**	.186	**.574**	**.479**	**.524**
Friends not involved or dropped out	.338	.053	.356	**.550**	**.544**	**.540**
Family not supportive of musical participation	.299	**.457**	.128	.332	**.794**	**.711**

Friends not supportive of musical participation	.148	.046	.334	.333	**.694**	**.584**
Parents won't let me	.210	**.479**	.143	.174	**.656**	**.532**
Family commitments	.229	**.512**	.258	.216	**.607**	**.524**

Note: Item loadings > .40 are bolded.

Table 13

Pattern Matrix for PCA with Direct Oblimin Rotation of Five-Factor Solution of 29 School Music Constraint Items

Item	Pattern Coefficients				
	Components				
	Personal Perceptions	Cost/ Transportation	Conflicting Activities	School Music Structures	Social Support
Lack of skills/not talented	**.811**	.127	- .106	- .053	.124
Not musical or creative	**.766**	- .010	- .150	- .003	.217
Lack of interest	**.736**	- .053	.159	.100	- .067
Lost interest	**.643**	- .088	.252	.148	- .098
Wanted to take other classes that were more interesting to me	**.548**	- .068	.394	.067	- .130
Not interested in the music classes offered	**.529**	- .133	.100	.391	- .078
Don't like to perform	**.516**	.275	.041	.141	- .115
Don't fit in with the music crowd	**.445**	.066	.064	.337	.137
Have been told I am not good at music	**.441**	.139	- .077	- .007	.397
Cost	.035	**.747**	- .036	.132	.036
Transportation issues	- .011	**.746**	.112	.115	- .008
Could not get an instrument	.103	**.614**	- .017	.181	.204
Participate in sports or other activities	- .014	- .182	**.820**	- .076	.189

Music events are scheduled at the same time as other activities or sports I do	- .183	- .028	**.776**	.155	.199
No time to practice outside of school	.076	.308	**.690**	- .016	- .015
Can't do before/ after school music activities	.042	.379	**.574**	.087	- .040
Pursuing other interests	.389	.141	**.535**	.000	- .126
More talented in another activity	.337	- .131	**.523**	.177	- .032
Teacher makes all the decisions, no student input	- .052	.092	- .111	**.771**	.156
Would rather create my own music than play/ sing someone else's	.012	.048	- .035	**.689**	- .090
Dislike the music we learn at school	.247	- .097	.074	**.672**	- .099
I learn better in an individual setting than a group setting	- .069	.146	.078	**.558**	.031
Don't like the school music teacher	.116	.000	.088	**.532**	.017
No opportunities for me to join music when I was ready	.016	.284	- .041	**.443**	.291
Family not supportive of musical participation	.129	.217	- .051	.067	**.703**
Friends not supportive of musical participation	- .053	- .190	.217	.150	**.688**
Parents won't let me	.078	.316	.047	- .093	**.570**
Family commitments	.051	.365	.172	- .074	**.490**
Friends not involved or dropped out	.092	- .201	.138	.388	**.472**

Note: Item loadings > .40 are bolded.

The researcher determined appropriate labels for each of the five components. The first component, Personal Perception Constraints, included items regarding interest in music and other subjects, personal evaluations of musical skill, and the perceived appropriateness of musical activity. The second component, Financial and Transportation Constraints, contained items related to financial costs and transportation issues. The third component, Conflicting Activity Constraints, included items related to involvement in other activities and time constraints. The fourth component, School Music Structural Constraints, consisted of items related to the content, organization, and focus of school music programs. Social Support Constraints was the fifth component and contained items regarding the perceived support of parents and family and the influence of friends. The researcher examined the internal reliability for each of the constraint scales using Cronbach's alpha. All of the scales had alpha values above .70, indicating good to relatively high internal consistency. The Cronbach's alphas for each scale were as follows: Personal Perceptions (.89), Financial and Transportation, (.79), Conflicting Activities (.84), Music Program Structures (.79), and Social Support (.77).

Constraint component ANOVAs. The researcher conducted one-way, between-groups ANOVAs to examine the differences in means between school music participants and nonparticipants for each of the five constraint components identified using principal components analysis. The researcher summed the items within each scale to calculate a composite score used in the analysis, which is described for each component below. The researcher encountered several violations of the assumptions for the ANOVA procedure regarding normality, equal variances, and outliers. For each constraint component, the results of the Shapiro-Wilk test for at least one group was significant, indicating that the

data distribution was not normal. The data distributions are described for those groups that violated the normality assumption as they are encountered in the analyses that follow. As indicated by significant results for Levene's test ($p < .05$), when the homogeneity of variances assumption was violated, the researcher conducted a Welch ANOVA procedure.

A number of outliers existed in the data for the constraint items, all of which were located higher than the rest of the group. The researcher decided to retain the outliers for the analysis for three reasons. First, the ANOVA procedure is fairly robust to deviations from normality, particularly when the group sizes are nearly equal. Second, the researcher's intention was to analyze and present the results from all of the data collected from the sample, as it was reported, with as few adjustments to or eliminations of data as possible. Third, in most cases, inclusion of the outliers actually resulted in a statistical calculation that was more conservative than if the outliers had been removed, as the differences between the group means were reduced. The means for all of the constraint items were higher for school music nonparticipants than participants. For 20 of the 33 constraint items, outliers existed above the means for the rest of the school music participant group, which had the effect of pulling the means higher and thus, closer to the means for the nonparticipant group. As stated previously, this resulted in a more conservative estimate of significant differences between the group means than had the outliers been eliminated. Therefore, the researcher decided to retain the outliers in the school music participant group for the following analyses.

However, outliers existed among both the school music participant and nonparticipants groups that were higher than the means for the rest of the group within

two constraint components: personal perceptions and school music structural constraints. The researcher decided to take a conservative approach and removed the outliers from the school music nonparticipant group before conducting the ANOVA procedure rather than risk results that might be biased by the presence of the outliers. This conservative approach resulted in the removal of three outliers from personal perception constraints and four outliers from school music structural constraints. For the reasons described above, the researcher retained the outliers in the participant group, thus, consistently testing the most conservatively calculated differences in means between groups.

The researcher set the significance level for all analyses a priori at .01, included effect sizes (eta squared) in the presentation of results, and interpreted these values according to Cohen's (1988) guidelines. Because Welch ANOVA does not provide an effect size, when using this particular analytical procedure, this value is not reported in the results presented.

Personal perception constraints. There were nine items within the Personal Perception Constraints scale. The results of the Shapiro-Wilk test was significant for school music participants (participants, $p < .001$; nonparticipants, $p = .316$) indicating that the data were not normally distributed. The data were positively skewed for participants, indicating more responses located below, than above, the mean for personal perception constraints. Levene's test was significant ($p = .026$), indicating heterogeneity of variances. There was a significant difference in personal perception constraint means between school music participants and nonparticipants, Welch's F (1, 285.04) = 140.52, $p < .001$. Nonparticipant responses reflected a higher mean score ($M = 32.13$, $SD = 10.47$) than participant responses ($M = 18.70$, $SD = 9.11$).

Social support constraints. There were five items within the Social Support Constraints scale. The results of the Shapiro-Wilk test was significant for both groups ($p < .01$), indicating that the data were not normally distributed. The data distributions for both groups were positively skewed, indicating more responses located below, than above, the mean for social support constraints. Levene's test was significant ($p < .001$), indicating heterogeneity of variances, so the researcher conducted a Welch ANOVA. There was a significant difference in social support constraint means between school music participants and nonparticipants, Welch's F (1, 253.85) = 30.77, $p < .001$. Nonparticipant responses reflected a higher mean score ($M = 11.47$, $SD = 5.34$) than participant responses ($M = 8.36$, $SD = 3.82$).

Financial and transportation constraints. There were three items within the Financial and Transportation Constraints scale. The results of the Shapiro-Wilk test were significant for both groups ($p < .001$), indicating that the data were not normally distributed. The data distributions for both groups were positively skewed, indicating more responses located below, than above, the mean for financial and transportation constraints. Levene's test was significant ($p < .001$), indicating heterogeneity of variances, so the researcher conducted a Welch ANOVA. There was a significant difference in financial and transportation constraint means between school music participants and nonparticipants, Welch's F (1, 235.01) = 54.19, $p < .001$. Nonparticipant responses reflected a higher mean score ($M = 9.00$, $SD = 5.03$) than participant responses ($M = 5.45$, $SD = 2.87$).

Conflicting activity constraints. There were six items within the Conflicting Activity Constraints scale. The results of the Shapiro-Wilk test were significant for

school music participants (participants, $p < .001$; nonparticipants =.165), indicating that the data were not normally distributed. The data distribution for participants was positively skewed, indicating more responses located below, than above, the mean for conflicting activity constraints. Levene's test was not significant ($p = .270$), indicating homogeneity of variances. There was a significant difference in conflicting activity constraint means between school music participants and nonparticipants, F (1, 302) = 60.44, $p < .001$. Nonparticipant responses reflected a higher mean score ($M = 23.62$, $SD = 8.88$) than participant responses ($M = 16.10$, $SD = 7.98$). The results of the eta squared calculation revealed a large effect sixe ($\eta^2 = .17$).

School music structural constraints. There were six items within the School Music Structural Constraints scale. The results of the Shapiro-Wilk test were significant for school music participants (participants, $p < .001$; nonparticipants = .104), indicating the data were not normally distributed. The data distribution for participants was positively skewed, indicating more responses located below, than above, the mean for school music structural constraints. Levene's test was not significant ($p = .056$), indicating homogeneity of variances. There was a significant difference in school music structural constraint means between school music participants and nonparticipants, F (1, 297) = 63.99, $p < .001$. Nonparticipant responses reflected a higher mean score ($M = 18.63$, $SD = 6.73$) than participant responses ($M = 12.81$, $SD = 5.84$). The results of the eta squared calculation revealed a large effect size ($\eta^2 = .18$).

The results revealed that school music nonparticipants reported a higher level of constraint experience than participants on all constraint components. This indicated a number of factors that obstructed school music participation. These results suggested

that students were more likely to participate in school music when they were interested in the available courses, believed they were musically talented, and enjoyed performing. Students were also more likely to participate in music when they believed their family and friends supported their involvement in school music. School music participants could afford the financial costs of involvement and had the necessary access to an instrument and transportation. Students were more likely to enroll in school music when they did not participate in other activities that presented scheduling conflicts or in which they believed they were more talented. Students who enrolled in school music did so when the opportunity was available and enjoyed the repertoire they studied, the group learning environment, and the school music teacher.

Overall logistic regression model on school music participation. The researcher used the data collected in the survey to build a multivariable logistic regression model to predict participation in school music using both categorical and numerical data. This analysis used the total scale score for the attitudes, perceptions, and values scales and the component scores calculated by SPSS for the constraint scales. In calculating the component scores, SPSS determined the regression weights, multiplied each response by these weights, and summed the products for each component. These calculations resulted in the totals of the optimally-weighted variables, or component scores, for each constraint item, which were summed by scale.

Hosmer et al. (2013) cautioned that sample sizes must remain the same when building a logistic regression model and comparing models of varying sizes (i.e., containing different numbers of covariates), which is an issue when there is missing data among the cases. As a result, the researcher excluded cases with missing data listwise,

which allowed for direct comparisons between different variables and versions of the model, using the same data. Therefore, the logistic regression analysis used data from the 268 cases (139 = school music participants; 129 = nonparticipants) that remained after the exclusion cases with missing data, the removal of outliers in the regression analysis of school music constraints, and the elimination of five cases with standardized residual values above 3. The number of cases for the smallest group was below the conservative guideline of 10 cases per variable for the initial model with 15 variables. However, the number of cases in the smallest group provided a cases-to-variables ratio of 8:1, which was within the guidelines of five to nine cases per variable suggested by Vittinghoff and McCullough (2007).

The researcher used the purposeful selection method (Hosmer, Lemeshow, & Sturdivant, 2013) to guide the building of the regression model, as described throughout the analysis that follows. The researcher chose this procedure for two reasons. First, no previous researchers had previously fit logistic regression models using the combination of factors explored in the present study (specifically, constraints), which led the researcher decided to consider all possible covariates in the initial model. This necessitated the need for a method to refine the number of covariates in the model through a stepwise elimination procedure, which forms the basis of the purposeful selection method. Second, Kinney (2010) used the purposeful selection method in music education research to build separate logistic regression models to determine the significant predictors of enrollment and persistence in middle school band. Similar to the present study, Kinney considered all possible covariates in the initial models and used the purposeful selection method to guide the process of model building.

As suggested by this method, the researcher conducted a univariable analysis of each independent variable to inform the selection of variables for the initial model (Table 14). In this process, the researcher fitted models for each variable independently using the binary logistic regression procedure to determine which factors should be included in the initial model. Hosmer et al. recommended a significance level from .20 to .25 for the inclusion of variables in the initial model, based on the work of Bendel and Afifi (1977) and Greenland (1989), who argued that the traditional significance level of 0.05 often does not identify all of the variables that might be important in a regression model. Bendel and Afifi tested various significance levels to establish which was best for determining variables that should be included in a logistic regression model. The authors concluded that a significance level of .25 to .35 was best for model building using stepwise procedures. Writing about variable selection in stepwise modeling procedures, where variables are entered or eliminated from a model sequentially, Greenfield argued, "if conventional significance levels are used, it is likely that some important confounders and product terms will *not* end up in the final model" (p. 344). Based on these sources, the present researcher set the significance level for inclusion of variables in the model at .25.

As a result of the univariable analysis, all of the independent variables except social support constraints met the criterion for inclusion in the logistic regression model. The researcher used the total scale scores for the Perceptions and Attitudes Toward School Music, Ability/Expectancy, Perceived Task Difficulty, and Perceived Task Values scales for school music in the analysis. The researcher used the constraint component scores calculated by SPSS for use in regression analysis.

Table 14

Univariable Logistic Regression Models of Scale Variables on Music Participation

Predictor	*B*	*SE*	Wald χ^2	*p*	Odds ratio	95% confidence interval	
						Lower	Upper
Perceptions & attitudes	.160	.018	75.648	<.001*	1.174	1.132	1.217
Ability/expectancy	.232	.033	50.162	<.001*	1.261	1.182	1.344
Perceived task difficulty	-.215	.040	28.346	<.001*	.807	.746	.873
Perceived task values - school music	.121	.015	69.467	<.001*	1.129	1.097	1.161
Personal perceptions	-1.759	.219	64.812	<.001*	.172	.112	.264
Social support	-.106	.130	.666	.415	.899	.697	1.160
Financial and transportation	-.346	.127	7.393	.007*	.708	.551	.908
Conflicting activities	-.830	.146	32.154	<.001*	.436	.327	.581
School music structures	-1.263	.181	48.464	<.001*	.283	.198	.404
Sex	-.450	.248	3.292	.070*	.638	.392	1.037
Free or reduced lunch	-1.384	.262	27.879	<.001*	.251	.150	.419
GPA	.734	.252	8.467	.004*	2.084	1.271	3.418
Native English	2.174	.460	22.309	<.001*	8.791	3.567	21.665
Familial structure	.461	.256	3.233	.072*	1.585	.959	2.620
Parental educational attainment	1.030	.363	8.042	.005*	2.801	1.374	5.707
Race/ethnicity	-2.015	.278	52.722	<.001*	.113	.077	.230

Note: *$p < 0.25$

The logistic regression procedure allows for the inclusion of categorical variables in the model, but they must be assigned numerical values in a procedure referred to as *dummy coding*. In this process, the numerals 0 and 1 are used in place of the categorical labels in order to be used in the logistic regression model. For binary variables, 0 was used to indicate that the condition did not exist and 1 was used to indicate the condition did exist. For example, the researcher dummy coded the dependent variable school music participation (0 = no; 1 = yes), the independent variables native English (0 = no; 1 = yes), and free or reduced lunch status (0 = not receiving free or reduced lunch; 1 = receiving free or reduced lunch). For categorical independent variables, 0 was used to indicate the reference group and 1 was used to indicate members not in the reference group. For sex, females were the reference group (e.g., coded "0") and males were coded 1.

The researcher collapsed four of the demographic variables into fewer categories to increase the number of observations per group and to make the groups more equal in size. Pallant (2010) warned that categorical predictors in logistic regression could be problematic when there were a small number of cases in each category and recommended that categories be collapsed in such cases. Hosmer and Lemeshow (2013) also cautioned against "'thin' data" (p. 145) related to a small number of outcomes and/or frequencies for categorical covariates, stating that some data patterns can affect the calculation of the parameter estimates in logistic regression. To safeguard against such "numerical problems" (p. 145), and in consideration of the lower than planned EPV ratio of usable cases to variables, the researcher decided to collapse demographic variables with more than four categories into two categories. These variables were: grade point average (0 =

"grades 0 to 3.0"; 1 = "grades 3.1 to 4.0"); family structure as defined by the parent with whom respondents reported living (0 = "neither or one parent/guardian"; 1 = "both parents/guardians"); race/ethnicity (0 = "White/Caucasian"; 1 = "all other races"); and parental educational attainment (0 = "don't know"; 1 = "high school diploma or less"; 2 = "education beyond high school diploma").

Because of the hierarchical nature of the constraint negotiation theory, the researcher entered the variables into the model in four blocks. The first block included all of the demographic characteristics: sex, race, native language, free or reduced lunch status, grade point average, familial structure, and highest parental educational attainment. The second block included the perceptions of and attitudes toward school music, musical ability and expectations for success, perceived musical task difficulty, and perceived musical task values for school music. The third block included personal perceptions constraints and the fourth block included the structural constraints: financial and transportation, conflicting activities, and school music structures.

The next step in building the logistic regression model was to fit a model using all of the covariates identified in the univariable analysis. As recommended by Hosmer et al. (2013), the researcher assessed each of the covariates (i.e., independent variables) in the model using the Wald statistic and its corresponding significance value. Based on this assessment at each stage of the process, the researcher identified, and subsequently removed, the covariate with the highest Wald statistic *p*-value, which indicated the covariate did not contribute significantly to the model. At each step of the elimination process, the researcher monitored the changes to the classification accuracy, Nagelkerke R^2, and Hosmer-Lemeshow test for the newly fitted model. The researcher then returned

to the Wald statistic and its associated significance value for each of the covariates, removing the covariate with the highest significance value to begin the process again.

The researcher also used the likelihood ratio test to determine whether the difference in the log likelihood (-2LL), or deviance, statistics between models was significant. The log likelihood statistic is a measure of the amount of unexplained variance, or deviance, that exists in the model. This test compares the predicted and actual outcomes for each case in the model and provides a measure of the error; large values represent a poor fit of the model to the data. The likelihood ratio test was appropriate for comparing models because of the process used to build the multivariable logistic regression model, as each model was nested in, or reduced from, the previous model (Hosmer et al., 2013). The likelihood ratio test determined whether the difference in the log likelihood statistics between models, expressed as a chi-square distribution with one degree of freedom, was significant. When the likelihood ratio test was not significant, the eliminated covariate had not made a significant contribution to the model so justified its removal.

Finally, to determine the utility of the model, the researcher used the proportional by chance accuracy criterion, according to which an improvement of the model's predictive accuracy exceeds that of chance alone by at least 25% (White, 2013). The researcher calculated this figure by totaling the squared proportions in each group and multiplying that number by 25%. Logistic regression models are considered useful if the classification accuracy of the model meets or exceeds the proportional by chance accuracy rate.

Before including any covariates in the model, the classification accuracy was 51.9%, under the assumption that respondents participated in school music. The log likelihood statistic for the initial model, including all covariates, was 119.85. The proportional by chance accuracy rate was 62.6%, so models with a classification accuracy rate that exceeded this value were useful. The initial model classified 91% of cases accurately, the Nagelkerke R^2 was 81.2%, and the Hosmer-Lemeshow test was not significant at .77.

Throughout the process described below, the researcher alternated between two steps in building the model, as suggested by Hosmer et al. (2013). After eliminating one covariate from the model, the researcher refit the model and then compared the coefficients of the smaller model to those from the previous model by calculating the *delta-beta-hat percentage* for each. This calculation divides the difference between the coefficients of the smaller and larger models by the coefficient of the larger model and multiplies the value by 100. Any variable for which the coefficient changed by 20% or more in magnitude indicated one or more of the excluded variables were important in adjusting for the effect of the variables in the model. All but two of the changes in magnitude for each of the covariates in every model were below the 20% threshold; these exceptions are described below.

The researcher removed eight covariates from the logistic regression in a series of analyses. For each of the models that follow, the Hosmer-Lemeshow and the likelihood ratio tests were not significant, indicating a good fit of the model to the data and confirmed the removal of covariates that did not contribute significantly to the model. The significance level reported for each of the variables that follows indicates their *p*-

value at the point of elimination. The first covariate removed from the model was grade point average (p = .929), which resulted in no change to the Nagelkerke R^2 or the classification rate. The next covariate removed from the model was ability/expectancy (p = .759), resulting in slight decreases to the Nagelkerke R^2 (81.1%) and the classification accuracy (90.7%).

After the removal of ability/expectancy, the *delta-beta-hat percent* calculation revealed a change of 30.2% in magnitude for financial and transportation, suggesting that ability/expectancy might provide an adjustment to the effects of financial and transportation when both were included in the model. However, at this point, financial and transportation had the largest p-value and was the next covariate for elimination, and there were five additional covariates whose Wald statistics had large significance levels that warranted removal. The researcher considered that ability/expectancy and financial and transportation might balance each other, but might not contribute significantly to the overall model and decided to proceed with removing the financial and transportation covariate. After removing financial and transportation, the *delta-beta-hat percentage* for all covariates remaining in the model changed less than 20% in magnitude, so the researcher decided to proceed with refining the logistic regression model and proceeded to remove nonsignificant covariates. The removal of financial and transportation constraints (p = .784) did not change either the Nagelkerke R^2 or the classification accuracy from the previous model. The results of the likelihood ratio test was not significant and supported the removal of financial and transportation constraints from the model.

The next covariate for removal for removal from the model was native English (p = .467), resulting in a decrease to the Nagelkerke R^2 to 81%, and a slight improvement in classification accuracy to 91%. The next covariate eliminated, highest parental educational attainment (p = .360), resulted in slight decreases to the Nagelkerke R^2 (80.6%) and the classification accuracy (90.3%). After removing sex (p = .270) from the model, the Nagelkerke R^2 decreased to 80.4%, but the classification accuracy remained the same, and after removing perceived task values (p = .339), the Nagelkerke R^2 decreased to 80.2% and the classification accuracy to 89.9%. After removing familial structure (p = .168) from the model, the Nagelkerke R^2 and the classification accuracy decreased to 79.8% and 89.6%, respectively. The final covariate removed from the model was race/ethnicity (p = .021), which slightly decreased the Nagelkerke R^2 to 78.7% and slightly increased the classification accuracy to 89.9%.

Once race/ethnicity had been removed from the model, the remaining covariates were all significant at the .01 level: free or reduced lunch (p < .001), perceptions and attitudes toward school music (p < .001), musical task difficulty (p = .001), personal perception constraints (p = .001), school music structural constraints (p < .001), and conflicting activity constraints (p = .001). Based on the purposeful selection method, no other covariates would be removed, as all reached the established significance level. However, after the elimination of race/ethnicity, the *delta-beta-hat percent* calculation revealed a change in magnitude for free or reduced lunch status of 42%, suggesting that race/ethnicity balanced the effects of free or reduced lunch status in the model. The log likelihood test was also significant (p = .02), indicating that the removed covariate was important in the model. Given these results, the researcher experimented with the

elimination of free or reduced lunch status to determine its effect on the remaining covariates. The results of the *delta-beta-hat percent* revealed that the change in magnitude for conflicting activity constraints was 23.6%, which suggested that free or reduced lunch balanced the effects of conflicting activity constraints in the model. The removal of free or reduced lunch status also decreased both the Nagelkerke R^2 (75.3%) and the classification accuracy (89.2%) of the model. The likelihood ratio test was significant ($p < .001$), which indicated that free or reduced lunch made a significant contribution to the model. At this stage, four of the five remaining covariates were all significant at the .01 level: perceptions and attitudes toward school music ($p < .001$), personal perception constraints ($p < .001$), conflicting activity constraints ($p = .007$), and school music structural constraints ($p < .001$). Only musical task difficulty ($p = .011$) was not significant, which would make it the next covariate for removal, but doing so would not address the change in magnitude for conflicting activity constraints and provide the necessary balance to the model.

Based on these results, the researcher determined that the model with seven covariates provided the best fit of the data and the most balance to the model. The researcher decided to include free or reduced lunch status and race/ethnicity in the model, resulting in changes in magnitude of less than 20% for all covariates, which restored balance to the model. Adding free or reduced lunch status back into the model resulted in a decrease to 1.1% in magnitude for conflicting activity constraints, and adding race/ethnicity resulted in a decrease to 14.9% for the magnitude of free or reduced lunch status. At this stage, four of the seven covariates contributed significantly to the model at the .01 level: school music constraints ($p = .003$), personal perceptions constraints ($p =$

.002), conflicting activity constraints ($p = .001$), and perceptions and attitudes toward school music ($p < .001$). Three covariates were not significant at the .01 level: race/ethnicity ($p = .021$), free or reduced lunch status ($p = .018$), and musical task difficulty (p .017). While race/ethnicity and free or reduced lunch were not significant, their inclusion provided essential balance to the model.

The next step in building the model, as recommended by Hosmer et al. (2013), was to check the only variable not included in the initial regression model to determine whether its presence contributed to the model when the other variables were present. The researcher added social support constraints to the model in a separate block but it did not contribute significantly to the model ($p = .126$). The addition of this covariate resulted in slight increases to the Nagelkerke R^2 (80.3%) and the classification accuracy of the model (90.3%). Despite this result, the likelihood ratio test was not significant ($p = .117$), suggesting that its inclusion in the model was not an improvement. Therefore, the researcher determined the addition of social support constraints was not significant and the researcher removed it, resulting in the model referred to by Hosmer et al. as the "preliminary main effects model" (p. 92) and the point at which the researcher should consider the addition of interaction terms in the model.

The researcher checked a number of interactions among the variables in the model (Appendix X). At this stage, the researcher considered interactions explored in previous research (Kinney, 2010) or justifiable from a theoretical perspective, adding them to the model one at a time and looking for those that contributed to the model at the .01 significance level (Hosmer et al., 2013). Interactions between race/ethnicity, free/reduced lunch, attitudes towards school music, and musical task difficulty resulted in

one four-way, four three-way, and six two-way interactions, none of which contributed significantly to the model. One four-way, four three-way, and six two-way interactions between race/ethnicity, personal perception constraints, conflicting activity constraints, and school music structure constraints were not significant. Interactions between free/reduced lunch and the constraint covariates resulted in one four-way, four three-way, and three two-way interactions not explored in the previous group. None of these interactions contributed significantly to the model. The final group of interactions between attitudes towards school music, musical task difficulty, personal perception constraints, and school music structure constraints resulted in one four-way, four three-way, and six two-way interactions, none of which contributed significantly to the model. As a result of these findings, no interactions were entered into the model, and the researcher considered it the "preliminary final model" (Hosmer et al., p. 93).

The final step in the process of building the logistic regression model was an assessment of the goodness-of-fit of the model to the data, for which the researcher used the Hosmer and Lemeshow test. This test indicates whether the observed and expected frequencies are the same for subgroups, or deciles, of the model population. A chi-square statistic computed from the observed and expected frequencies tests the null hypothesis that there is no difference between observed and expected values, which would indicate the model is a poor fit with the data. For this model, the test was significant and the researcher considered the logistic regression model final.

The final logistic regression model was statistically significant, $\chi^2(7) = 244.354$, $p < .001$ and the Hosmer and Lemeshow goodness of fit test was not significant ($p = .679$), indicating the model was a good fit for the data. The Nagelkerke R^2 revealed that the

model explained 79.8% of the variance and the log likelihood statistic was 126.799, which was significantly different from the baseline model ($p < .001$). The percentage accuracy in classification was 89.6%, which exceeded the proportional by chance accuracy rate of 62.6%, suggesting that the model was useful. The model correctly predicted 89.9% of school music participants (sensitivity of the model) and 89.1% of nonparticipants (specificity of the model) into their observed categories. The positive predictive value of the model (i.e., the percentage of correctly classified music participants compared to the total number of cases predicted to be participants) was 89.9% while the negative predictive value (i.e., the percentage of correctly classified cases of nonparticipants compared to the total number of predicted nonparticipants) was 89.1%.

The results of the logistic regression model are displayed in Table 15. The Wald test revealed that four predictors were statistically significant at the .01 level: school music constraints ($p = .003$), personal perceptions constraints ($p = .002$), conflicting activity constraints ($p = .001$), and perceptions and attitudes toward school music ($p < .001$). Three covariates were not significant at the .01 level: race/ethnicity ($p = .021$), free or reduced lunch status ($p = .018$), and musical task difficulty (p .017). The presence of race/ethnicity and free or reduced lunch status were needed to balance the effects of other predictors in the model. None of the standard errors for the coefficients was above 2.0, suggesting no problems with multicollinearity. The odds ratio indicated that receiving free or reduced lunch or identifying as a race/ethnicity other than White/Caucasian decreased the odds of a student participating in school music. As perceptions of the difficulty of musical tasks increased, the likelihood of participating in

Table 15

Multivariable Logistic Regression Model on School Music Participation

	B	SE	Wald χ^2	*p*	Odds ratio	95% Confidence interval	
						Lower	Upper
Race/ethnicity	-1.199	.521	5.304	.021	.302	.109	.836
Free/reduced lunch status	-1.293	.547	5.585	.018	.274	.094	.802
Perceptions/attitudes toward school music	.144	.024	36.766	< .001*	1.154	1.102	1.209
Musical task difficulty	-.172	.072	5.693	.017	.842	.731	.970
Personal perception constraints	-.950	.307	9.564	.002*	.387	.212	.706
Conflicting activity constraints	-.849	.252	11.360	.001*	.428	.261	.701
School music structure constraints	-.903	.301	9.021	.003*	.405	.225	.731
Constant	-3.151	1.113	8.012	.005	.043		

Note: * $p < .01$, $df = 1$ for all covariates

school music also decreased. Increases in the intensity of constraints regarding personal evaluations of musical interest and skill, conflicting activities, and school music structures also decreased the odds of a student enrolling in music. The only variable that increased the likelihood for participation was attitudes towards school music, with more positive attitudes resulting in 15% higher odds for school music participation.

An examination of the final logistic regression model at each step revealed the influence of each block of covariates in the model. The demographic characteristics included in the model, race/ethnicity and free or reduced lunch status, accounted for 29% of the variance in school music participation. However, based on these characteristics alone, the model predicted participation (78.4%) more accurately than nonparticipation (67.4%). Once the researcher added personal perceptions of the school music program, the difficulty of music, and personal constraints to the model, the amount of variance explained by the model increased to 73.5%. Adding personal perceptions to the model increased its classification accuracy to 85.4% and provided balance to the prediction of participants (86.3%) and nonparticipants (84.5%). Finally, adding conflicting activities and school music constraints to the model increased the amount of variance explained (79.8%), classification accuracy (89.6%), and prediction of participants (89.9%, and nonparticipants (89.1%).

The intrapersonal factors (perceptions of school music, musical difficulty and personal constraints) accounted for the largest increase of variance explained in the model between steps (44%). This suggested that intrapersonal constraints may be the most powerful factors in predicting both participation and nonparticipation. The second most influential group of covariates in the model consisted of demographic

characteristics: race/ethnicity and free or reduced lunch status. These accounted for nearly a third of the variance in the model for this sample of students. The addition of structural constraints (conflicting activities and school music constraints) to the model resulted in an increase of the variance explained by only 6.3%, suggesting that these factors had the least influence in predicting school music participation. However, the increase in predicting nonparticipants was greater than that for participants, suggesting that these factors were more influential on those students who decide not to participate in school music.

The logistic regression model suggested that a combination of personal and structural factors could predict both participation and nonparticipation in school music with a high, and nearly equal, rate of accuracy. The researcher considered all of the demographic characteristics; musical attitudes, perceptions, and values; and school music constraints examined in this study as potential predictors in the logistic regression model. Social support constraints did not contribute significantly in predicting participation in school music. Race/ethnicity, free or reduced lunch status, and musical task difficulty were not significant predictors, but were important factors in contributing to the overall model. The significant predictors (i.e., perceptions and attitudes toward school music and personal perceptions, conflicting activities, and school music structures) were derived from scales created by the researcher. That these factors were significant in predicting both school music participation and nonparticipation suggested that these new perspectives might provide greater insight into the reasons students decide to participate or not participate in school music. Based on these results, the researcher failed to reject the hypothesis that an inability to negotiate intrapersonal, interpersonal, and structural

constraints (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, Crawford, & Godbey, 1993) resulted in student nonparticipation in secondary school music.

Qualitative Analysis of Open-Ended Survey Items

As described in Chapter Three, the researcher adopted a pragmatic paradigmatic stance, and chose to write in the style and the voice appropriate for each method (O'Cathain, 2009). As a result, this section is written in first person to acknowledge the role of the researcher in the qualitative analysis discussed below for the open-ended survey items regarding other factors and barriers experienced by school music nonparticipants in the study.

Additional Barriers

In the open-ended survey response excerpts that follow, I added as few instances of bracketed text (e.g., *sic*, grammatical corrections) as possible, to respect the voices of the students who shared responses to these items. In one open-ended survey item, I asked school music nonparticipants to share obstacles that prevented their participation in the school music program but that were not included on the survey. Of the 131 responses to this question, nearly half (60 respondents) had no additional obstacles to report. The majority of the other responses included obstacles to school music that were already included on the survey. These barriers included time or lack of time, sports activities, work, lack of interest in school music, conflicts with other required or desired classes, family-related matters, transportation issues, lack of musical talent or skill, and disliking school music classes.

Beyond the obstacles that were included on the survey, music nonparticipants also reported specific, school-related obstacles that were not included, such as homework.

Two students pointed out how a lack of awareness and promotion of the opportunities the school music program had to offer factored into their nonparticipation. One student commented, "No one talked about the music classes or promoted them. I just assumed they weren't worth it" (survey response, February 21, 2015). Another respondent did not know whether the school offered courses other than band and orchestra; in addition to choir, there were two such courses available: music theory and history of popular music.

Nonparticipant respondents perceived obstacles in the structure of school music programs, stating that school music was not fun and that the musical styles studied were not interesting, including music that "the school is required to teach" and "isn't what the kids wants its more of what the teacher wants to hear" (survey response, February 21, 2015). Nonparticipants viewed the group setting common to many school music classes (e.g., ensembles) as a barrier, with two respondents sharing that they learned better on their own or in individualized settings. One of the students connected the problem of group learning with their perceived lack of musical talent:

> I never really liked to do anything in front of a group of people. I was always scared of being made fun of messing up and people laughing at me that is the main reason why I don't join any music programs. if i was good at it maybe but that's not the case with me. (survey response, February 21, 2015)

For some school music nonparticipants, negative experiences with a music teacher served as obstacles to school music. Two respondents claimed that music teachers had "favorites," but these respondents did not provide additional details. One student discontinued band after being moved to a different, less-preferred instrument, and another wanted to join the jazz band but was unwilling to participate in marching band,

which was a requirement of students in the jazz program. One student simply stated that she was not allowed to return to the music program.

Nonparticipant survey respondents discussed issues related to social pressures and perceptions. Two respondents commented that they did not connect with the students who enrolled in music, and another shared that there was pressure not to take music courses because so few students did. One music nonparticipant spoke about how she quit band in middle school to try to fit in with a specific peer group, but continued participating in marching band as a colorguard member. However, since that time, she came to realize that "all my friends are in band and I sincerely regret not continuing" (survey response, February 21, 2015). Family members also played a role. One student shared that her brother's comments about her being a terrible flute player led to her quitting the school band program. One student commented on the pressure to take math and science classes and his perception "that there are more societal issues about people thinking that music is a waste of time" (survey response, February 21, 2015).

Factors for Not Joining or Discontinuing School Music

In two open-ended survey items, I asked school music nonparticipants to share the factors that went into their decision to never participate in school music or to discontinue their musical involvement. This constituted two subgroups of students within school music nonparticipants: former participants and nonparticipants. Three themes emerged from a qualitative analysis of participant responses that were common to both subgroups: lack of interest; perceptions of, or experiences with, school music; and academics or other activities. For each subgroup, one additional theme also surfaced. Social factors played a role for former participants in discontinuing their pursuit of music in school,

while a perceived lack of musical talent factored into nonparticipants' decisions never to engage in school music.

The most frequently referenced reasons for not participating in music for the former participant and nonparticipant subgroups were academics and other activities. Many students in both subgroups mentioned that they could not fit music into their full class schedule, or that they were concerned about meeting all of the requirements for graduation. Students who once participated in music also wrote that their decision to focus more intensely on academics resulted in discontinuing musical study. For some of these students, this involved coursework in preparation for college or a specific career, while, for others, the completion of the fine arts requirement allowed them to move on to other courses. One student connected her band involvement to making her grades a priority, writing:

> I needed to stop missing my classes and missing out on important information when I went to the band room and practiced. It was a great experience playing instruments but school was starting to become way more important and bringing up my grades was a must. (survey response, February 21, 2015)

Other students stated that their involvement in sports, other unspecified activities, and jobs led to their decisions not to enroll in, or to stop taking, music classes. Students in both the former participant and nonparticipant subgroups shared that they did not have time to participate in music, and those who had once enrolled in such courses pointed specifically to difficulty in finding time to practice or to commit to increased demands on their time. One student who did not have time in her school schedule rationalized, "I can

always look up how to play an instrument at home on the internet" (survey response, February 21, 2015).

For both groups of students, a loss or lack of interest in school music resulted in nonparticipation. Many students who had discontinued school music believed that it was boring, while some of the students who enrolled in music decided to stop once they discovered they did not enjoy it. However, a few students who had never been involved in elective music also said they did not like school music. One former music student wrote about how her experience changed through her years of involvement in the band program, "I didn't like it anymore…it had become more of an obligation than a hobby" (survey response, February 21, 2015).

Many former participants and nonparticipants remarked that their perceptions of, or experiences with, school music influenced their decisions not to participate. Students who had not participated in school music observed music students had to get up early for rehearsal before school and that learning mainly occurred in group settings, which factored into their decision not to participate. For two respondents in this group who played guitar, the jazz bands offered the only opportunity for guitarists to play, resulting in a limited number of opportunities and the pursuit of a musical genre neither of them personally enjoyed. The structure of school music was problematic for students in both subgroups who believed that the music selected for study was boring, while others said they would rather listen to music than perform it.

Students who had once participated in school music provided a much wider variety of responses, most of which were based on their personal experiences. Students cited their negative experiences with school music teachers and/or their previous band

and choir programs contributed to their decisions to discontinue. One girl commented, "The music teacher said that I was not good at playing the flute and he said that I can't come no more to band class" (survey response, February 21, 2015). Former music students wrote that their inability to attend concerts, which constituted part of the course grade in the Tremont Schools, resulted in their nonparticipation. A few students found the specialized nature of music classes, competition with other musicians, and the absence of classes in which they could learn how to play instruments they found interesting (e.g., guitar) did not fit with their personal goals. Two students talked about how the role of choice in band resulted in nonparticipation. One student wanted to move to a different instrument, a request denied by the teacher, and another was moved by the teacher to an undesirable instrument, both of which resulted in a loss of interest and subsequent nonparticipation. Two other students commented that they "did not want to stop" (survey response, February 21, 2015) participating in band, but had no control over their circumstances.

Students who had once participated in school music shared social reasons for discontinuing participation. Students wrote that they quit music when their friends did or because of other people's opinions; one girl shared that other music students criticized her musical ability. For others, a lack of familial support or value for music contributed to their choice to stop taking music. One student wrote:

> I remember that my mother always hated going to my concerts. I had to beg for her to come see me. As I got older my family felt it more necessary that I work on what would make colleges like me more. They felt it was a waste of time and effort for me to focus so much on choir. (survey response, February 21, 2015)

Those who had never participated in school music shared that perceiving themselves as lacking musical skill contributed to their noninvolvement. One student who loved to sing did not possess enough musical confidence to join the choir. Another student shared a perception of school music as a place for those who can already play or sing, writing, "I don't know how to play any instrument so I can [not] join band and I don't think I am good at singing either so I didn't join any choir" (survey response, February 21, 2015).

One student who had never participated in music provided a vivid description of his perception of the problem with school music, summarizing many of these challenges:

> It seemed like there were no grey areas for music classes. I spend a lot of time with sports and with music classes either you could sign up for band and choir, classes that consisted of music-oriented kids, that meet early before school to practice, or you just weren't involved [in] any music classes. For example, P.E., is a class that almost everyone in high school takes. It exposes students to many sports and activities that might interest them. Do you have to be a varsity athlete to take P.E. and be successful? Absolutely not. When you sign up for P.E. are you all the sudden committing a big portion of your time out of school? No. Also, performances for these music classes are held at the same time as sporting events that I participate in. It seems like you have to do one or the other because of the time commitments. I had friends in middle school that I've been separated from because they did the music thing and I did the sports thing. That's upsetting. (survey response, February 21, 2015)

As revealed in the open-ended responses, students who had not participated in school music or who had discontinued their participation shared a number of factors that led to their decision not to be involved. The main themes that arose from these responses included (a) a lack of interest in school music, (b) musical study interfering with success in academics and other activities, and (c) negative perceptions of, or negative experiences with, school music. For students who left music, social factors often played a role, while those who never joined felt inhibited by personal perceptions of a lack of musical ability.

Chapter Summary

The results of the statistical analyses indicated that significant differences exist between students who participate and do not participate in their school music program in terms of demographic characteristics and attitudes toward, perceptions of, and values for music inside and outside of school. The researcher also discovered significant differences between groups regarding experiences with constraints to school music participation. The researcher considered all of the covariates examined in the analyses in building an overall logistic regression model to determine which were significant in predicting participation in school music. The final model contained seven covariates, four of which were significant in predicting participation and nonparticipation at a high level.

The researcher investigated the relationship between several demographic characteristics and school music participation. The researcher discovered a statistically significant relationship between school music participation and sex, race/ethnicity, native language, free or reduced lunch status, grade point average, and highest parental educational attainment. The researcher determined that various populations were

overrepresented or underrepresented among school music participants and nonparticipants in the sample. Hispanic students and non-native English speakers were significantly underrepresented among school music participants, while White students and those whose parents held a Master's or other advanced professional degree were significantly overrepresented. Hispanic students, non-native English speakers, and those who received free or reduced school lunch were significantly overrepresented among school music nonparticipants. These results suggested that certain student populations remained underserved or over-served by the music program at the research site.

There were significant differences between school music participants and nonparticipants in their attitudes toward, beliefs in, and perceptions of school music. School music participants had significantly more positive attitudes toward school music than nonparticipants. Participants reported significantly higher confidence in their musical abilities, greater expectations for success in music, and lower musical task difficulty than students who did not enroll in music at school. These results suggested that students who possessed positive attitudes toward their school music program, were confident in their musical abilities, and found musical tasks to be relatively easy were more likely to participate in school music.

Significant differences also existed in the perceived values for music inside and outside of school. School music participants reported significantly higher values for usefulness, interest, and importance regarding music inside and outside of school than nonparticipants. The difference between group means for school music was greater, suggesting that students who find school music to be useful, interesting, and important would be more likely to enroll in school music courses. School music nonparticipants

had higher mean scores for the value of music outside of school than inside of school; however, only about half of these students reported participating in music making activities outside of school. Within the group of nonparticipants, there was significant difference in musical values between those who participated in music making outside of school and those who did not. These results suggested that students' context-specific (i.e., inside or outside school) values for music were related to the places in which they participated in musical activities. The researcher found significant differences in the constraint experiences between school music participants and nonparticipants for 29 of the 33 constraint items, with nonparticipants reporting significantly higher levels of constraint. The items for which no significant differences existed were family and work commitments, and family and friends not supportive of musical participation. These results suggested that students who participated in school music experienced lower levels of constraint overall than nonparticipants, making them more likely to participate in school music.

A surprising finding among the constraint means was that several outliers existed among school music participants, all of which were located higher than the means for the rest of the group. These outliers represented participants who reported much higher constraint experiences on two-thirds of the constraint items than the rest of the group. This suggested that a number of school music participants experienced high levels of constraint, yet continued to participate in school music. Analysis of the constraint items also suggested that school music students who experienced high levels of constraint might have more resources, support, and strategies for navigating the constraints to their participation than nonparticipants.

A principal components analysis of the constraint items resulted in five components of school music constraint. Personal perception constraints consisted of items related to interest in music and other subjects, perceptions of musical skill, and evaluations of the appropriateness of musical activity. Financial and transportation constraints contained items related to the financial costs of participation and transportation issues. Conflicting activity constraints consisted of items related to involvement in other activities and affiliated temporal restrictions. School music structural constraints contained items related to the content, organizational structure, and focus of the school music program. Social support constraints consisted of items regarding perceptions of familial and peer support and influence.

The researcher built a multivariable logistic regression model to predict participation in school music, considering all of the categorical and numerical variables examined in the study. The final model was statistically significant, had a high accuracy in classification rate (89.6%), and predicted school music participants (89.9%) and nonparticipants (89.1%) that was nearly equal. The model contained seven predictors, four of which were statistically significant in predicting school music participation: perceptions and attitudes toward school music, personal perception constraints, conflicting activity constraints, and school music structural constraints. Race/ethnicity, free or reduced lunch status, and musical task difficulty were not significant predictors, but were important in the model. These results suggested that a combination of demographic characteristics, personal perceptions, and structural factors contributed significantly to participation. The significance of four of the researcher-created scales in the final model suggested that constraint negotiation might provide a new theoretical lens

in the field of music education through which we might gain greater insight into students' decisions to participate (or not) in school music programs.

The next chapter describes the qualitative results from the second phase of the study, designed to help explain the quantitative results. The researcher used a collective case study design to explore the experiences and perceptions of 12 students who did not participate in their school music program. These students participated in semi-structured interviews with the researcher to learn more about how their attitudes, perceptions, values, and constraint experiences might have contributed to their decisions not to participate in school music. The researcher also explored the musical lives of these students outside of school.

CHAPTER FIVE: QUALITATIVE RESULTS

This chapter presents results of the qualitative analysis for the second phase of this study, intended to provide a rich and multidimensional portrait of school music nonparticipation in one Midwestern high school. The chapter begins with a detailed description of the main study setting and the gatekeepers (Creswell, 1998), as well as the school's music program and faculty. This is followed by detailed presentations of each of the 12 cases, and within-case themes (Creswell, 1998; Miles & Huberman, 1994; Yin, 2014) for each are presented in order to share the forces that shaped each individual's decisions regarding school music. After the presentation of each case, cross-case themes (Creswell, 1998; Miles & Huberman, 1994; Yin, 2014) are presented that converge the data from each of the individual cases to answer the qualitative research questions. The chapter closes with the results of the textual analysis of the open-ended item on the survey regarding the ideas that survey respondents suggested for engaging more students in school music. As outlined in Chapter Three, the pragmatic paradigmatic stance of the researcher led to the decision to write in the voice and style appropriate for each method of the study (O'Caithan, 2009), and, for this reason, content of this chapter will be presented in first-person.

The following research questions guided the qualitative phase of the study:

1. What reasons do students give for not participating or for discontinuing their participation in school music programs?
    a. How do identified barriers and other factors affect students' decisions not to participate in school music programs?

2. What revisions to current secondary school music programs might engage a larger percentage of the student population?

Review of Qualitative Methods

As described in Chapter Three, the qualitative data collection constituted an instrumental collective case study (Creswell, 1998; Stake, 1995) in which I selected cases to provide different perspectives (Creswell, 1998) on the phenomenon of nonparticipation in school music. Within the context of the sequential explanatory mixed methods design (Creswell & Plano-Clark, 2011), I used a purposeful maximum variation sampling method (Creswell, 1994; Miles & Huberman, 1994) to select participants from groups identified as underrepresented and overrepresented in school music programs (Elpus & Abril, 2011). I collected qualitative data through interviews with 12 school music nonparticipants, observations of the music courses, and interviews with the music teachers to allow me to compare the perceptions of the interview participants with my observations of the music courses and programs at Oak Valley High School. The student interviews followed a semi-structured format and were recorded for later transcription.

The analysis of the qualitative data followed Miles and Huberman's (1994) flow model for data analysis, which consisted of three stages: data reduction, data display, and drawing conclusions/verification. Throughout the analysis, I proceeded through these three stages in a recursive and abductive (Morgan, 2007) manner along with extensive reading of the transcripts and field notes. Throughout each stage, I frequently returned to the research questions and theoretical frameworks that guided this study. I used topic codes (Creswell & Plano-Clark, 2011); identified emergent codes, themes, and patterns; wrote memos to record observations (Glesne, 2011); and wrote summaries to reduce the

data. I created data displays and concept maps to visually organize the data and identify patterns within and between codes and verified conclusions using transcripts, field notes, memos, and survey responses (Miles & Huberman, 1994). After identifying the within-case codes and developing themes, I created narratives for each case that included my interpretations of the data. I repeated this analytical process to develop cross-case themes by comparing and contrasting the codes across the 12 cases. The analysis and interpretations of these themes resulted in the development of a narrative of the collective cases. I followed the verification processes of clarifying researcher bias, member checks, and external audits with two outside reviewers (Creswell, 1998).

Description of the Setting and Music Program

Oak Valley High School sat at the top of a hill, so far back from the street you would not know it was there if not for the sign on the corner of Highland and Market Streets, proclaiming the many titles the band has won at the state contest. Many of the years engraved on the large, wooden sign represented distant memories, except for a recent entry that commemorated the band's return to "championship" status. As I turned and made my way up the hill, the school came into sight, and I pulled into the large parking lot adjoining what I would discover was the back of the school. It was around 7:15 a.m. on a cold, dark, winter morning, and there was little activity as I made my way into the building. Just inside the entry, a tall, Black girl wearing a sweatshirt and baggy sweatpants leaned against the last door on the right, headphones in her ears and phone in hand. Over the next few months, I would see her in this location, nearly every day, as if she were a sentinel. Sometimes she was alone and on her phone, and other times she hung out and conversed with friends. On the few days when she was not in her usual

location, I wondered whether she was not coming to school or if she was just running late.

Oak Valley High School was located in a residential neighborhood in an older part of Tremont, consisting of single-family homes and apartment buildings. As I neared the school each day, I saw students walking, driving, or taking school or public transportation. It was not uncommon to see taxicabs pick up or drop off students at the back door, and both school and city busses stopped at the doors to the lunchroom below the administrative office. Throughout the day, a steady stream of school busses provided transportation for students taking off-campus classes. One of the district employees who lived in the neighborhood shared that the area around the school was one of the more economically depressed parts of town. She explained that, because housing was more affordable in this area than other parts of the city, that many of the families who lived there were economically disadvantaged (field notes, October 24, 2014). This likely explained why nearly 60% of the students at Oak Valley received free or reduced school lunch.

Oak Valley High School was part of the district's 1:1 program, which provided laptop computers for every high school student. This program made it possible for all students, regardless of their economic status, to have access to the internet and to the educational resources provided through the online learning management system used by teachers throughout the school (field notes, January 6, 2015). Each student also had a school email account, though very few of them checked it, which provided additional challenges as the study progressed. Several students commented that they did not check

email because their teachers communicated with them through the online learning platform (field notes, January 21, 2015).

The building itself was an example of 1970s school architecture: two square buildings connected by a hallway with large windows, similar to a skyway. Because of the hill, the back entrance of the school was on the second floor, while the front entrance was on the first floor. On one side of this hallway, a large, three-story building covered in beige and brown colored brick housed classrooms for math, English, science, social studies, and art. In the center of the second floor, there was a library and a large, recently renovated auditorium. At the far end of the building, an addition housed new classrooms. On the other side of the "skywalk," the administrative office marked the entrance into the second building, accessed by taking a set of stairs down to the ground level. There was a huge mural painted on the walls on one side of the stairwell and large windows on the other. At the bottom, the stairs opened onto the lunchroom, which was located right next to the gymnasium. To the right, a left turn led down a hallway where the music and industrial technology departments sat side-by-side. Continuing to circle around the building, and behind the gymnasium, was the athletic department. Around the corner, on the other side of the gymnasium were the school kitchen and cafeteria areas, which opened again onto the lunchroom. I was struck by the thought that all of the noisy classrooms and areas were located together, tucked away and set apart from the rest of the building.

Faculty and Staff

When I entered the main office on my first day of data collection, the principal's administrative assistant, Sandra, greeted me and instructed me on the procedure for

signing in to the building. Sandra was wearing an earpiece to answer the phone and was very friendly in welcoming me to the school. It was evident immediately that she was incredibly organized and would serve as my main contact at the school during the project. She provided me with a copy of the school's daily schedule, an alternating block format with four classes meeting each day for 90 minutes and resulting in eight classes meeting over two days. Sandra confirmed the class schedule information that I found online for the music classes, with which I would speaking that day. Then, she sent me in to meet with the principal.

Mr. Mitchum was an energetic, positive leader who had a great sense of humor and often had a smile on his face. When we first met about the project, Mr. Mitchum shared that he was personally interested in engaging a larger proportion of the Oak Valley student population in activities at the school and hoped my project might give them some insight. He acknowledged the large Hispanic population at the school (nearly 40% of the student body) and shared that he had been talking with the school's band director about the possibility of starting a mariachi group in an effort to connect with this population. Mr. Mitchum was realistic about the challenges that faced his students and his staff, but he was also optimistic and determined to help both of these groups to be successful.

Mr. Mitchum escorted me to the music department and, when we entered the stairwell, I commented positively about the mural on the wall. He laughed, saying that mine was a common reaction for people new to Oak Valley, but that the mural had actually been there for some time. Mr. Mitchum suggested that those in the school probably did not fully appreciate it, because it had been there so long (field notes, January 5, 2015). When we entered the double doors to enter the music department

hallway, it was crowded with racks of music stands and students hanging out, either standing and talking or seated using laptop computers. At the end of the hall, the early morning jazz band rehearsal was in its last few minutes. Mr. Mitchum led me into the choir room and introduced me to one of the vocal music teachers, Ms. Patterson.

Music Program and Faculty

There were five music faculty members at Oak Valley High School, two each in choir and band and one in orchestra, most of whom were early career teachers, and all of whom were White. The choir directors engaged in team-teaching the two auditioned choirs, often leading sectional rehearsals, and each led one additional ensemble. Ms. Patterson, the lead director of the choral program, was in her sixth year of teaching, all at Oak Valley. She was the only music faculty person who was at Oak Valley High full time and taught the history of popular music and adaptive music (i.e., special education) classes. Ms. Patterson had a vivacious personality, a friendly disposition, and a genuine concern for her students. She connected many of her lessons to songs from popular culture, illustrating examples of musical concepts, and used extensive questioning to engage her students in their learning. Her colleague and assistant choir director, Mr. Franklin, taught at the nearby middle school in addition to teaching in the afternoons at the high school. He had five years of teaching experience, four of those at Oak Valley. Mr. Franklin had a terrific sense of humor that he used to great effect with the students, particularly in teaching the women's choir where he calmly and deftly redirected their outbursts of giggles and other teenage female behaviors onto the tasks for the day.

The two band directors also took a team-teaching approach to their work with students, and both had responsibilities with marching band. Mr. Hoffman was the newest

member of the faculty, in his second year as the lead director of the band program and in his ninth year of teaching. He directed the full ensemble rehearsals for both concert bands, led the auditioned jazz band, and taught a jazz improvisation course. Mr. Hoffman had a professional demeanor on the podium and conducted rehearsals in a fairly "straight ahead" manner, using humor to lighten the mood when things were not going well. He wanted his students to do well and described his careful efforts in selecting literature that his students would find challenging, yet would be able to perform at a high level. In addition to his duties at the high school, he also taught at one middle school. Mr. Richards was the veteran among the music staff, having taught for 11 years, with eight of them at Oak Valley, where he led the second jazz band and assisted with the concert bands. Outside of one period at the high school, he taught most the day at two elementary schools and one middle school. Mr. Richards, an alumnus of the Oak Valley Bands, was a quiet leader, often sitting in with various sections of the band, playing and instructing students during the rehearsal.

The orchestra director, Ms. Buckley, was in her third year at Oak Valley, where she started her teaching career. Ms. Buckley taught two orchestral ensembles at the high school every other morning and instructed string students at three elementary schools and one middle school the remainder of the week. She was both kind and demanding, holding the students to high standards on even the smallest details and encouraging the students' continued improvement. Of the music faculty, I had the least contact with Ms. Buckley, as she spent the least amount of time in the building due to her responsibilities to other students and schools in the district.

The music department was located in its own wing of the school, on the corner of the second building. There were two large rehearsal rooms, one for choir on the left side of the hallway and one for band at the end of the hallway. The orchestra room, located on the right side of the hallway, was so small it could no longer accommodate the full string ensemble, so they rehearsed in the choir room across the hall. At the end of the hallway, to the right the band room, there was a smaller practice and storage room situated just before two sets of double glass doors that opened to the outside. While the ceilings were low and the hallway felt cramped, the main rehearsal classrooms were large, with tall ceilings. The music wing reflected the age of the building, but the rooms were in good condition. It was common to find students in the hallways during the lunch periods, eating, talking with friends, or using their mobile devices or computers. Some students practiced or took a lesson with the band directors during this time.

In addition to the traditional ensemble classes (two bands, four choirs, and two orchestras), the music program offered five additional courses, four of which were non-performance courses. The jazz bands met during "zero hour," before school started each morning. A jazz improvisation class met during the school day for students who played in the jazz band and wanted additional work on chord theory and soloing in that genre. The school offered two music theory classes, designed to meet in consecutive semesters and subject to enrollment demands, so the course did not meet during the semester I collected data. There was an adaptive music class offered specifically for students in the special education program who required the presence of educational assistants who seemed to enjoy the class activities themselves. There was also a history of popular music class in which students learned about various genres of American popular music,

song forms, artists, and basic musical concepts. Ms. Patterson created a workbook for this course and distributed other instructional materials through the online learning system. Students in the course studied a combination of teacher- and self-selected music and artists. Ms. Patterson had divided the course material into units, such as the blues, which began with an introduction to each style of music and its distinctive elements, along with exemplary artists known for their work in each genre. The students selected the artists and musical works on which they focused various projects throughout the semester. These projects corresponded to the various learning objectives of the course and provided opportunities for students to apply what they had learned to music and musicians that they found personally meaningful. I observed two student presentations during my observations: one on the music of Johnny Cash including one of his final songs, *Hurt*, and another on the band Queen, focused on the song *Bohemian Rhapsody* (field notes, January 15, 2015).

In the fall semester, there was one additional course offered for the first time, a choir for English as a Second Language learners (ESL). I first heard about this pilot project from Mr. Mitchum during our initial meeting, before data collection, and he described the class as an opportunity to reinforce English language skills using music (field notes, December 4, 2015). Ms. Patterson described the course in the same terms, but shared that she was unclear about how to strike the balance between English language learning and music learning in the class (field notes, January 7, 2015). The content of the class included solfege, rhythmic dictation, playing recorder, and singing popular music. Ms. Patterson expressed a desire for more training in working with ESL students and a clearer direction for the curriculum for the course before she taught it again. She

believed that the course provided a good opportunity for these students to experience music in school and enjoyed working with the students.

School Music Nonparticipants

When I met with nonparticipants, I did so throughout the school during the homeroom periods, which occupied 20 minutes, four days each week. These meetings took place primarily in the auditorium and sometimes in the library. Mr. Mitchum introduced me to the students and attended these meetings when his schedule allowed, but I was often on my own with the students. During subsequent missions to "follow up" with students, I had the opportunity to view much of the school, including the in-house, alternative high school, which some of the school music nonparticipants in the study attended. Some students talked with me briefly after the homeroom meetings to informally share their thoughts on the school music program at Oak Valley. I enjoyed seeing these students and chatting with them in the halls or during lunch while I was in the field and found the students to be respectful and kind to the stranger in their midst.

The choice not to engage in school music is highly personal and likely based on many different factors for every school music nonparticipant. In sharing the interview participants' stories, it was important for me to bring their voices to this project. As with the quoted material in Chapter Four, the interview excerpts will be quoted as spoken and contain as little bracketed text as possible to respect the voices of the interview participants. I also adopted a more informal writing style throughout this chapter, particularly when summarizing participants' accounts of their experiences. The use of a formal writing style felt inauthentic to the teenagers who so willingly shared their thoughts and experiences with me, so I reserved the "scholarly tone" for my

interpretations. In doing so, I hope this allows the reader to connect with these students and their experiences. The introduction of each interview participant begins with a demographic description, followed by a synopsis of their experiences with school music and their musical lives outside of school, through which the themes for each case emerge.

Presentation of Cases and Within-Case Themes

One of the sampling criteria for selecting students to interview was their previous level of participation in school music. The survey used conditional branching to direct students to items based on their level of participation in school music: current participant, former participant, or nonparticipant. For the interviews, I selected an equal number of students from the former participant and nonparticipant groups as determined by the conditional branching items. However, three students in the nonparticipant group, Carly, Kahlil, and Trenton, had actually participated in school music during both elementary and middle school, but indicated on the survey that they had never learned to sing or play an instrument at school. I found this contradiction intriguing, but as a long-time music educator it was disheartening that these students did not perceive their school music teachers to have taught them the skills that traditionally define what it means to be a musician. After interviewing these students, it seemed as though they identified more strongly with their musical activities outside of school than with those inside of school. Trenton and Carly's strongest sense of musical identity connected to the instruments they learned to play outside of school and that they still continued to play. Kahlil's musical medium was the computer, upon which he created music outside of school, because he did not have the opportunity to pursue music technology as a class at school.

The individual cases are presented in two groups, beginning with former school music participants Daniel, Sophie, Ayeshia, Elena, Nicole, and Ignacio. The second group begins with those nonparticipants who actually participated in school music: Carly, Kahlil, and Trenton. The second half of this latter group consisted of those students who never participated in music at school: Olivia, Ibsaa, and Thanh.

Daniel

Daniel was a 17-year-old, White/Caucasian male and a high school junior who indicated his grade point average category as 3.1 and 4.0. He lived with both of his parents, who were high school graduates, and did not receive free or reduced school lunch. Daniel was a tall young man with brown hair and had an athletic build. He was wearing a red sweatshirt and loose-fitting, grey sweatpants on the day that we meet, looking every bit the athlete that he was. He had an easygoing manner and his answers were short and direct, so I used follow-up questions frequently to encourage him to provide more detail.

Daniel participated in school music as an elementary and middle school student. He participated in elementary music class and started playing percussion in the beginning band, but discontinued his participation in middle school because he did not believe he could make the necessary commitment to music while he was participating in sports. Interestingly, Daniel did not talk a lot about his school band experience, even when I probed further. He talked a lot about his middle school experience in a general music class, and it was clear that this experience was enjoyable.

As a middle school student, Daniel enrolled in the general music class, which he found to be "actually really fun" (Daniel, personal communication, April 8, 2015). The

class met daily for one semester, and he took the class every year he was in middle school. In this course, he played drums, started to learn piano, and familiarized himself with music technology using computers. He especially enjoyed his last year in the class, in which one of the options for a class project involved performing a song on the *Rock Band* video game with other students in the class. According to Daniel:

> In eighth grade, you had a choice on what you wanted to do. You could do a song on the piano, or *Rock Band*, or something like that. So I did *Rock Band* and then a couple friends did that and that was really fun…I think it was an AC/DC song, actually. It was pretty fun. It was funny. (Daniel, personal communication, April 8, 2015)

Daniel had never participated in music during high school and did not participate in music outside of school, which he explained was due to his heavy involvement in sports. He started getting more involved in sports in the sixth grade, when "everything started picking up" (Daniel, personal communication, April 8, 2015) and additional training sessions became part of the expectation for student athletes. For Daniel, sports was a huge part of his identity, which was the first of three themes to emerge from his story: athletic self-identity, no time for school music, and music as recreation.

Athletic self-identity. Daniel was actively involved in sports every season, participating in football, basketball, baseball, and track. As part of his training, he also lifted weights in the morning before school. It was clear that he placed a high value on sports participation and envisioned sports being part of his future. For him, participation in sports was a priority, as wass maintaining his training schedule. Daniel hoped to continue playing sports in college and was hopeful that his training and hard work would

result in an athletic scholarship. For Daniel, sports was a competitive endeavor, but it was also something that he enjoyed doing with his friends for fun, as he talked about how they often played pickup games of baseball at Lakewood Park or at someone's house. He saw his sports involvement being a life-long endeavor, continuing to play recreationally after college. It was clear that he valued sports participation highly and credited his mother's support of his athletic endeavors. She, too, was an athlete and shared her experiences with Daniel, as well as her regrets, which motivated him to try new things. When I asked Daniel if his mother was involved in music during high school, he responded that he did not think she was. Later, he expressed the idea that if his parents had encouraged him, he might have done more with music.

Throughout the interview, Daniel's answers revolved around sports and his busy sports schedule. He described his typical school day; "I'm saying, like, morning lifting, and then coming to school and having all my classes full, and then practice after school and it was just…I'm not getting home until after 7:00" (Daniel, personal communication, April 8, 2015). In both his survey responses and the interview, he ordered conflicting activity constraints and personal constraints as the top two barriers to his participation in music. This was supported by the frequency with which he referenced his sports schedule and how he would not have time to participate in music at school – and definitely not have time for music outside of school. The personal priority that he placed on sports made it clear that his schedule revolved around practices, training, and games, while everything else was secondary. For Daniel, the value of participating in sports and his personal identity as an athlete clearly drove his decisions regarding any other

activities or events that he might consider. His mother reinforced these choices through her support of his athletic involvement.

No time for school music. The second theme, related to his sports schedule, was not having time to participate in music at school. Daniel described two ways in which time constraints made musical involvement at school impossible: his athletic schedule and his "full schedule" (Daniel, personal communication, April 8, 2015) at school. He stated, "I just don't have extra time to do anything with music" (Daniel, personal communication, April 8, 2015). While he described how his academic schedule did not allow time for music, I recalled the reality of his schedule during the semester we spoke, and questioned the degree to which this was true, or whether this might be an excuse.

On the surface, a lack of time to participate in an activity would intervene between preference and participation, providing a structural constraint by definition (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). When Sandra looked at Daniel's class schedule to assist in arranging a good time for the interview, we discovered that he had two study halls that semester, scheduled in two consecutive periods for 90 minutes each, meeting every other day. Clearly, Daniel did have the time to take a music class if he wanted to do so, which suggested that he was choosing not to take music at school, despite his perceived temporal constraints. When I asked him about this during his interview, he responded:

> And I think too, like high school, there's not that middle school class where it's just like general music. You have like marching band, or jazz band, or something really specific. Nothing where you can just go in and do something like you did

> in middle school, like learn how to play the piano or mess around with the drums. (Daniel, personal communication, April 8, 2015)

This comment suggested that Daniel would take a music class if he had the time in his schedule, but only if the type of class that interested him was available. This description gave insight into his preferences and expectations for a school music class similar in structure to his middle school general music class. In this instance, the time factor appeared to be an excuse, as it was his personal preference for a specific type of music course that influenced his desire to participate and served as an intrapersonal constraint (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993).

Music as recreation. The third theme, music as recreation, connected to the kind of musical experience Daniel would have liked as an option in high school. He enjoyed his middle school general music class; the word "fun" recurred throughout his descriptions of that experience. Daniel said:

> I had so much fun doing it. It was educational, but also just almost like – get away from regular class. You could just bang on drums and just kind of have fun with it and listen to the music and everything. And doing it with friends, it was really fun I thought. (Daniel, personal communication, April 8, 2015)

Daniel took the general music class for three years in middle school, even though it was not required. He described the elements of the class that appealed to him: self-guided learning facilitated by the teacher, student choice in selecting songs, informal musical learning, and an experiential and constructivist environment. He explained the pride he felt in teaching himself, "It's kind of satisfying to be like, oh, I can read this and then boom! I'm kind of playing the piano a little bit" (Daniel, personal communication, April

8, 2015). When I asked what kind of songs students learned to play in this class, he told me they learned little Mozart pieces on the piano and popular music selected by the students.

Daniel shared that music "wasn't, like, a big priority for me I don't think. It was just kind of an extra, a fun thing to do on the side" (Daniel, personal communication, April 8, 2015). This suggested that, for him, music as a course in school was recreational activity that provided a break in his day during which he could enjoy active music making that allowed him to explore a number of different instruments and types of music for enjoyment. Daniel's middle school music class clearly had an impact on him, as his discussions of school music centered solely on that experience. This experience also influenced how he viewed the differences between school music and music outside school. In describing the differences between music inside and outside of school, Daniel articulated his belief that school music was more for fun and music outside of school was for those who were more serious about music. This belief seemed to summarize his experiences and evaluations of his past school music and current sports participation. School music was an enjoyable break in the school day, while sports were a serious commitment of time outside of school related to his future goals of an athletic scholarship.

Sophie

Sophie was a 17-year-old Hispanic/Latina female in her junior year of high school who indicated her grade point average category as 2.1 and 3.0. She lived with both of her parents, who had each completed a Master's degree or equivalent, and did not receive free or reduced school lunch. Sophie was a petite young lady wearing glasses with thick,

black frames and a black stocking hat over her dark hair, which she wore short, except for long bangs that were swept to one side over her eyes. She wore royal blue, skinny jeans and a grey and black sweatshirt, and her fashion sense seemed fitting for the artist she was. Sophie wore a necklace, a black guitar pick pendant hanging from a silver, dog tag-type chain. The inscription, in white, read "MUSIC IS LIFE." This was particularly striking to me as she described her negative experiences with school music.

Sophie formerly participated in general music, choir, and band in elementary and middle school, but had not enrolled in any high school music courses. She continued to sing for fun by herself for one to two hours a week and did not participate in any other musical activities outside of school. She used to write songs, but she did not do that much anymore. Three themes emerged from Sophie's story: self-fulfilling prophecy, musical autonomy, and music appreciation.

Self-fulfilling prophecy. As a preschool child in foster care, Sophie was not exposed to music, because "music was against some of the religions. We couldn't sing. We couldn't dance" (Sophie, personal communication, April 3, 2015). She joined the elementary school choir in the second or third grade at her new school after she was adopted. At a parent-teacher conference, the music teacher asked her mother if Sophie had a hearing disorder, because she had noticed that Sophie was not a good singer. Sophie's mother told the teacher Sophie did not have a hearing problem and went on to say that her daughter loved music, an encounter she shared with Sophie years later. Sophie continued to participate in the elementary choir and she felt as though her musical skills improved.

In the fifth grade, Sophie wanted to join the band and play clarinet, but the teacher would not allow her to join the band class until she could play well enough to pass the "tryout" (Sophie, personal communication, April 3, 2015). Because Sophie assisted the band teacher with small tasks, like cleaning up the band room, the teacher allowed her to join the band as a seventh grader. Sophie felt that the teacher did not really want her in the band and that she placed Sophie on the simplest instrument, the cymbals. The teacher later helped Sophie learn to play the snare drum, though Sophie was more interested in playing the piano or bells.

Sophie moved to Tremont after she finished the eighth grade, but did not intend to continue participating in school music. She summarized her musical experiences and how they factored into her decision to stop participating in music at school:

> Apparently I wasn't good enough, because I didn't know how to read notes, so I never was able to actually play that instrument, but with choir I got better later on, but I was never that great. Then once I moved here, I didn't want to be embarrassed and everything. I didn't want to let the choir group or the band group down, so I quit the music program and started to do other activities like sports and stuff. Then I discovered I was really terrible with sports, so I stuck with art ever since. (Sophie, personal communication, April 3, 2015)

When Sophie moved to Tremont, there were three weeks remaining in the school year, so even though she had completed the school year before she moved, she attended the last three weeks of school in Tremont. Despite her feelings about music, and because there was just a short period of school remaining in Tremont, Sophie decided to join the middle school band. The band director told Sophie's mother that she did not seem to be "into it"

because he could "tell she's not practicing" (Sophie, personal communication, April 3, 2015). Her mother explained to the teacher that Sophie's band experience to that point had not been good, and that she had not really learned what she needed to know. Once Sophie's mother shared this with her, Sophie decided to quit band, saying, "Since nobody was really going to help me out or really take the time, I'm just not going to do it" (Sophie, personal communication, April 3, 2015).

These experiences influenced Sophie's musical self-perceptions. When she moved to Tremont, she said, "I looked at all of the band members who were in the percussion section, and I was like, 'They're way better than I am. They're more experienced'" (Sophie, personal communication, April 3, 2015). She also believed she was a "terrible singer" (Sophie, personal communication, April 3, 2015). Sophie explained that she did not feel as though her music teachers helped her to develop her musical skills or took her musical involvement seriously. She said she felt that she "was just the shadow of all the band" (Sophie, personal communication, April 3, 2015) and not talented in comparison to other students. Sophie's lack of confidence in her musical abilities served as a powerful intrapersonal barrier for Sophie, who had no desire to perform music or to get involved in the school music program.

Musical autonomy. Throughout the interview, Sophie spoke about her belief that students needed opportunities to make choices regarding their musical activities in school. She related examples of situations in which she felt as though her choices were restricted and expressed the value that she placed on "being independent" (Sophie, personal communication, April 3, 2015) from a young age. Sophie described how she did not have an opportunity to choose the instrument that she would play when she was

finally allowed to join band in middle school. She said, "For the longest time, I wanted to learn how to play the clarinet, and I never, they never asked me…I never really told them that, and I wish I could have, but I never did" (Sophie, personal communication, April 3, 2015). Sophie's mother, uncle, and grandfather all played instruments or had been in the school band and persuaded her to participate in school band. However, Sophie did not find this encouragement to be supportive; instead, she felt pressured to join band. When she decided she could no longer continue, she said that she felt she would never be as successful as they had been.

Sophie pointed to repertoire as a major barrier to her continued participation in school music. She believed students should have some choice in the repertoire they would study in school. For choir, she felt the repertoire was "too old fashioned" (Sophie, personal communication, April 3, 2015), particularly foreign language texts, and thought this could be improved though greater stylistic variety, including a cappella and "modern" (Sophie, personal communication, April 3, 2015) works. She suggested that giving students an opportunity to choose between pieces selected by the director would be better than the music teacher making all the programming decisions. Sophie shared that she did not have the opportunity to make such choices but thought it would help to sustain students' interest and involvement in school music.

Music appreciation. Sophie made it clear that she had no desire to perform music, but stated, "I'd rather listen to music that an artist has made than listen to myself sing" (Sophie, personal communication, April 3, 2015). She described how her uncle shared his favorite rock and metal bands with her and how she would listen to Guns N' Roses and Queen with her father. Her family encouraged Sophie to make her own

musical choices, both in listening and in participation. She provided a detailed description of the kind of course she thought might be added to the school's music curriculum, focused on popular music appreciation. Sophie described how students could learn about the history of musical artists of their choice, including their musical influences. She also thought that students in the course could listen to and sing a couple of songs by each artist. I thought this was an interesting idea coming from an artist, as Sophie's description of the class seemed similar to the way that an artist might approach the critique of a piece of visual art.

Ironically, the course that she described, minus the singing piece, was already offered at Oak Valley, a history of popular music course. In observing this course, I noted that the teacher divided the class into units based on musical styles, such as the blues, and allowed students to report on artists of their choice for their projects (field notes, January 7, 2015). Students presented their projects to the class, often using audio and video excerpts to highlight favorite songs (field notes, January 15, 2015). Sophie's suggestion was an excellent reminder to music educators that non-performance classes might serve as a potential direction for expansion in school music programs. It also highlighted the importance of promoting the courses we offer to students outside of the school music program in order to engage new students. In Sophie's case, the history of popular music class was a good fit for her expressed desire, but she simply was not aware it existed. This also supported Eccles' (2005) assertion that individuals do not choose from all of the available options, but only from among those options of which they are aware.

Ayeshia

Ayeshia was a 15-year-old Hispanic/Latina female in her sophomore year of high school who indicated her grade point average category as 3.1 and 4.0. As a child, she first learned to speak Spanish and has taken four years of English as a Second Language courses at school. Ayeshia lived with both of her parents, neither of whom graduated from high school, and received free or reduced school lunch. Ayeshia was a petite girl with long, wavy hair that she wore loose around her shoulders and she was dressed in a dark, long-sleeved tunic and floral print leggings. She had a broad smile, an outgoing personality, and seemed interested in answering my questions.

Ayeshia was an active music participant in elementary and middle school. In addition to elementary music class, she started playing clarinet in the band in the fifth grade. In middle school, the band director asked her to move from playing clarinet to the bass clarinet, and she felt proud to have been given that challenge. Ayeshia decided to discontinue band in seventh grade, but she joined choir in eighth grade and also took the general music class in which she learned to play guitar and piano. When it came time to enter high school, Ayeshia thought about joining choir or maybe returning to band, but given the number of required classes, she felt she could not make time in her schedule for music. Outside of school, Ayeshia learned to play piano and sing, and, while she did not participate in structured musical activities, she enjoyed singing by herself or with friends. The themes that emerged from Ayeshia's interview included a strong self-identity as a good student, student choice in music, and music for all students.

"Good student" identity. Ayeshia explained that when she was in the seventh grade, she felt she could no longer continue band because her grades were suffering. In

middle school, band lessons occurred during other classes, so Ayeshia would have to leave her class to go to her lesson (a "pull out" lesson model). Ayeshia was conflicted about missing one or the other, which she felt would result in "losing grade points either way" (Ayeshia, personal communication, April 6, 2015). She said that sometimes she just stayed in class so she would not miss the notes or time for homework, but other times she went to band instead. This continued until her grades got worse, as she explained:

> I kind of stopped at that point, because it was getting really bad where both of them [class grades] actually were D's. I'm usually an A and B student. That kind of got me freaked out and thought, 'Well, that class is more of 'if I want to,' and I kind of can't right now.' I dropped out of it, and I got into choir. (Ayeshia, personal communication, April 6, 2015)

Ayeshia also felt pressure from her mother to get good grades in school. She said that her mother valued grades first, and that music or sports came second. Her mother had encouraged her musical involvement to that point, but "because it was bringing down my grades, she didn't like it" (Ayeshia, personal communication, April 6, 2015), telling Ayeshia that she would need to discontinue band so she could focus on school. The next year, Ayeshia joined choir instead. She shared that concert performances were part of her class participation grade in music and that she was unable to get a ride to some performances, resulting in a "small deduction" (Ayeshia, personal communication, April 6, 2015) from her grade.

As a high school student, Ayeshia still felt pressure to maintain good grades, to stay on top of her homework, and to fulfill her responsibilities to her part-time job and family. She described how she felt required courses minimized the amount of time she

had to try other classes, "Here's all these different classes that you are supposed to take…. It kind of sucks having to do all these other things and not be able to maybe try new stuff" (Ayeshia, personal communication, April 6, 2015). Ayeshia was happy to share that she was taking one class, a sewing class, because it interested her, but it seemed as though there were other things she would have tried if she felt she had the time in her schedule. It was clear that Ayeshia valued being a good student, likely influenced by her mother's expectations, and that good grades came first. The priority on school and the structure of the band lesson program presented intrapersonal and structural constraints that led to her nonparticipation (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993).

Student choice. Ayeshia found her choir experience to be enjoyable and thought "it was really cool" (Ayeshia, personal communication, April 6, 2015) to learn songs in various languages. However, Ayeshia did not enjoy all of the repertoire selected by the music teacher, saying, "It didn't really interest me, it was more by force. I kind of didn't want to be doing pieces of music where I don't really want to sing. I would rather be singing something a little different" (Ayeshia, personal communication, April 6, 2015). She felt there needed to be a greater variety of musical styles and genres that would appeal to more students. However, she did not believe that the choir should sing only popular music either, because she thought that some of it was not very good.

Ayeshia believed that school music could be more collaborative between the students and the teacher, and the selection of repertoire was one example of a place where students might exercise some choice. She thought that the music classroom could be one where everyone provided input throughout the music making process, not just the

teacher. Ayeshia's idea of school music was one in which students were "cooperating and giving their opinions…. To be able to just all work in a way together, just not with the teacher instructing and the students having to obey whatever they say" (Ayeshia, personal communication, April 6, 2015). Her ideas suggested that the structure of school music, both its content and instructional methods, presented a structural barrier that diminished her desire to participate (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993).

Ayeshia still loves music, and would like to join choir again, but feels that she has been away from it too long. She feared she would not be as good as the other singers, suggesting a low self-perception of her musical abilities that might function as an intrapersonal barrier (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). Given her criticism of the older styles of repertoire she did not enjoy in her previous choir experience – specifically, Latin and religious music – I was surprised that the choral activity she thought would be fun was singing in the school's madrigal choir.

Music for all students. Ayeshia believed that all students should have an opportunity to experience music in school, which she felt was as important and reading and math. She said, "There should be at least one class that is required…so everyone can be able to have an experience in music" (Ayeshia, personal communication, April 6, 2015). She suggested this music class be required of every student for at least one semester and offered at both the middle and high school levels. Ayeshia's suggestion goes beyond the current fine arts requirement at Oak Valley, in which students must enroll in at least two fine arts classes in two different disciplines, to make one music

course mandatory for all students. Ayeshia's believed this course might help students as a time when they began to feel pressure about their plans after graduation and perhaps get them thinking about a career in music. Ayeshia suggested that school music courses might expand beyond ensemble experiences, which she thought "would be really, really awesome" (Ayeshia, personal communication, April 6, 2015). Some of her ideas centered on offering experiences similar to the middle school general music class, where students could explore several instruments, rather than focusing on just one, as students did in band.

Elena

Elena was a 15-year-old Hispanic/Latina female in her sophomore year in high school who indicated that her grade point average category was 3.1 and 4.0. She lived with both of her parents and received free or reduced school lunch. Her mother finished high school, but her father did not. Elena's native language was Spanish, and she reported taking English as a Second Language classes at school for six years. Elena was a petite young woman who wore her dark hair pulled back from her face in a short ponytail. She wore rectangular-shaped glasses and a black, zippered hoodie over a t-shirt and jeans. She seemed to have a relatively quiet and reserved personality, but, as we talked, she shared freely about her experiences.

During elementary and middle school, Elena participated in a variety of school music courses, including general music, band, and choir. In addition to her elementary music class, Elena decided to play clarinet in the school band as a fifth grader, which she enjoyed until her family had to return to Mexico for six months and she had to stop. When she returned to Tremont as a sixth grader, she joined choir for two years and

enrolled in the middle school general music class for one year. Elena decided not to enroll in any music classes as an eighth grade student, because she did not feel that she had room in her schedule. She also did not take any music classes in high school for this same reason. Within the last month before the interview, Elena had reconnected with music by beginning to play guitar. Playing on her own terms was one of three themes to emerge out of Elena's story, along with a perception of school music as being serious and a disappointment.

Disappointment. Elena was excited to begin playing the clarinet in the school band until the experience was interrupted, saying:

> I'm not really sure what happened, but starting second semester, we went to Mexico for six months, and then I came back right before sixth grade started. When I was doing my registration, I said I wanted band, but they said I couldn't do it…. She [the counselor] said that I signed up too late, that they would all be ahead of me, so that I couldn't do it…. Well, I really wanted to do it, so I was kind of disappointed. (Elena, personal communication, April 7, 2015)

Elena shared that there were other students who also wanted to join or rejoin band, and the counselor told them that they "weren't going to be as good as the rest of the kids" (Elena, personal communication, April 7, 2015). The counselor told Elena that if she wanted to join, she needed to talk to the instructor. After approximately one week of unsuccessful attempts to find the band teacher at school, Elena gave up, even though she had wanted to continue playing. Elena joined choir instead and sang for two years.

The instrumental teachers in the Tremont Schools traveled to different buildings and grade levels throughout the week. All but four of the five Oak Valley music teachers

traveled, and two of them visited elementary schools as part of their job duties, so it was not surprising that Elena could not connect with the teacher when she wanted to get back into band. Elena was happy to tell me that her sister had missed a semester of band but was allowed to rejoin this year.

School music is serious. Despite her sixth grade experience, Elena would still be interested in participating in band at school, but she felt that it was too late for her to do so. Elena explained:

> I think they take it very seriously, so it's hard to get into it a bit later than most students. Like, if you want to get in your junior year, you can't, because they're so serious about having background knowledge." (Elena, personal communication, April 7, 2015)

When she was playing the clarinet in the fifth grade, Elena said the band director was "harsh" (Elena, personal communication, April 7, 2015) and made her feel as though she did not meet his standards. Elena related how, in the sixth grade, she heard other students talking about how serious band was and how that led her to believe there was no point in her trying to "catch up" (Elena, personal communication, April 7, 2015) to the other students.

Elena also criticized the competitive element of band, which she had heard about through other students. She believed that the students should be able to play instruments for enjoyment and not have to worry about competing. It seemed as though Elena related competition to the playing requirements she had to meet in elementary school, which she often felt did not allow enough time for her to do her best. Elena said, "They do events as a band, don't they? Where they all go and perform. It's like if you're not good, then

they don't want you with them or something like that" (Elena, personal communication, April 7, 2015). She related this to the seriousness of the school music program, confirming that her perceptions regarding school music constituted structural barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993) that negatively impacted her participation. In addition, her perceptions of her own ability, particularly in comparison to other students who continued to play, also served as an intrapersonal barrier to her participation.

Playing on her own terms. Elena characterized her family as being very supportive of her involvement in school music. She credited them with encouraging her to start playing the clarinet, because they thought it was a good thing for her to do. She described her father's family as being quite musical, sharing that nearly everyone played guitar, which prompted her desire to learn to play that instrument. Elena said, "When we visit them, they're always playing guitars, or they have their instruments out. I thought that was really cool, so I wanted to do it also" (Elena, personal communication, April 7, 2015). She had started teaching herself to play guitar using online resources about a month before we spoke. Elena said that she preferred to learn on her own, so her engagement in self-guided learning was not surprising. Her father was supporting Elena's learning by checking on her progress but was not serving in any kind of teaching role. Rather, he allowed her to learn on her own and provided support for her as she needed it.

Nicole

Nicole was a 15-year-old Hispanic/Latina female and high school freshman who indicated her grade point average category as 3.1 and 4.0. She lived with her parents,

both of whom graduated from a two-year college, and received free or reduced school lunch. Nicole's native language was Spanish, and she reported taking English as a Second Language classes for one year. Nicole was a young lady of medium height with long, dark, wavy hair she wore pulled partially pulled back from her face. She was dressed in a pair of skinny jeans and a navy, zippered sweatshirt on the day we spoke. Her personality seemed quite serious when she greeted me, but she spoke very openly about her previous musical experiences. Nicole was not involved in any musical activities outside of school, but occasionally sang by herself for fun.

In elementary and middle school, Nicole participated in band after being encouraged by her fifth grade teacher, who wanted all of his students to "try something new" (Nicole, personal communication, April 7, 2015). He suggested that she should try band, which gave her the courage to overcome the shyness and fear that prevented her from joining other school activities. She decided to play the clarinet with a group of friends who started playing that instrument as well. She participated in band through the eighth grade, when she decided that band was "not the same any more" (Nicole, personal communication, April 7, 2015), and her friends had all decided to stop playing. Nicole's band experience over the four years she played might be described as long periods of struggle, punctuated by short bursts of encouragement, the latter of which were not frequent enough to balance the former to a point that could sustain her interest in school band. From these experiences, three themes surfaced, all of which were related and centered around her school band participation: negative band experiences, expectations versus reality, and frustration.

Negative band experiences. Nicole struggled in her first year of band, explaining that she, "wasn't really good at it" (Nicole, personal communication, April 7, 2015). Soon, her friends progressed to a point where they joined the concert band class (which Nicole referred to as "full band"), but she did not. She described how this process worked:

> All my friends that had joined band with me and played the clarinet, they were all moving ahead. It used to be, like, you had private lessons, and, if you were good enough, you would move into full band. Out of the clarinets, I was the only one that hadn't moved into full band by the middle of the year. It was kind of … pretty sad. It was depressing that I still couldn't move on. (Nicole, personal communication, April 7, 2015)

Nicole arranged for extra help from the teacher and joined the full band in two weeks, which motivated her to keep going.

Nicole's band director encouraged her to continue in band in middle school, but, when she did, she found the new teacher to be much more demanding, "I know the teacher is supposed to be strict, but there was no room to mess up. You had to be perfect" (Nicole, personal communication, April 7, 2015). At this time, Nicole struggled with expanding her range to higher notes, so her band director moved her to the bass clarinet, which she found to be "the worst experience ever" (Nicole, personal communication, April 7, 2015). She played in a section with two other students who were also struggling, and she was often embarrassed when they arrived at an exposed section in a song, and there was nothing but silence. While the director was careful not to "embarrass or put us on the spot in front of everybody" (Nicole, personal communication,

April 7, 2015), Nicole felt humiliated. She also missed her friends who played clarinet and sat in another section of the band. Nicole said, "I can say I truly hated that experience. It was not something I enjoyed. Then, the sixth grade school year ended, and I was just glad to be free from band" (Nicole, personal communication, April 7, 2015).

Despite this experience and her diminished excitement for band, Nicole was willing to try band in seventh grade, because she would have a new band teacher. She asked to switch back to clarinet, which he allowed, and she was reunited with her friends. Nicole especially appreciated her new teacher's patience and the fact that "he understood that sometimes you just don't understand something" (Nicole, personal communication, April 7, 2015). She continued to struggle with playing "high notes," and her director offered her opportunities to play the lower notes, with which she more comfortable. Nicole was really proud to be part of a performance at an amusement park at the end the year, which motivated her to continue playing another year. However, she lost interest as an eighth grader; she was not even looking forward to the annual trip. She explained, "It wasn't fun anymore, because it was like I was pulling myself through the year to get to that one event at the end of the year. I didn't think it was worth it anymore" (Nicole, personal communication, April 7, 2015).

In addition to her loss of interest, Nicole's friends had decided they would not continue playing clarinet in high school. She said, "They did not pressure me or make me quit. It was a big influence for me to stop being in band" (Nicole, personal communication, April 7, 2015), particularly when they pointed out that she would be by herself in band. The combination of Nicole's loss of interest in band and her friends

having made the decision not to continue contributed to her decision not to participate any more. Hearing the tremendous struggles that Nicole described throughout her band experience, it was not difficult to understand her decision to discontinue. Related to her negative band experiences and contributing to her decision to discontinue was a shift in her perception regarding band.

Expectations versus reality. Nicole initially started playing in band to experience something new, at the suggestion of a trusted teacher. Her expectation for this experience was to have fun playing the clarinet, which she did for most of the first year. However, by the end of eighth grade, she characterized her experience in negative terms, "I was kind of tired of it, and it was something I had to do, instead of something I wanted to do" (Nicole, personal communication, April 7, 2015).

Throughout her experience, Nicole discovered that playing an instrument would not always be "fun," and it was clear that her negative experiences played a part in her diminished enjoyment for playing. She also described how the expectations of the directors included meeting performance standards in order to achieve a good grade in the class, which required increasingly more effort. In addition, by the middle of the eighth grade, she had less choice about playing a lower part, and much of the band music consisted primarily of high notes. Even though she felt like she was "Not perfect, but I understood how to do them" (Nicole, personal communication, April 7, 2015), they were still problematic. Nicole described how these experiences changed how she viewed her involvement in band:

> I used to see band like a hobby, like, I like it. I want to do it. Now it was more like you have to do it, you have to finish it, you have to meet this standard. It wasn't as fun anymore. (Nicole, personal communication, April 7, 2015).

Martignetti (1965) and Gates (1991) suggested that, when students had different expectations for their musical involvement that did not match the experience itself, this misalignment often resulted in nonparticipation. This seemed to be a contributing factor for Nicole. When I asked whether she could recall the moment when the band experience changed for her, she did not hesitate: switching to bass clarinet. Because this was not something she wanted to do, but was forced upon her, she shared how her view of band changed; she no longer enjoyed it.

Frustration. While either of these experiences would have been enough to dissuade a student from continuing band, there was a third element that played a role in Nicole's decision: frustration. Throughout the interview, she referenced the fact that she had low self-perceptions of her musical ability, which she sometimes described as a lack of talent and at other times as a sense that she was "not good enough" (Nicole, personal communication, April 7, 2015). This started in her very first year of band, when she was the last clarinet to move to full band. She also spoke frequently about her problems learning to play the "high notes" and the high level of difficulty that she associated with being successful at that skill. Combined, these perceptions resulted in frustration for Nicole, making her unable to enjoy playing, and, thus, the band experience in general.

While it appeared, at times, that Nicole had a fixed-entity view of musical ability (Schmidt, 2007), in which musical talent is something one either possesses or does not posses, she also took responsibility for not practicing as much as she should have.

O'Neill and McPherson (2002) found that students who felt they lacked musical ability often played for only a short time before they discontinued. She said, "For band, since I always thought of it as a hobby, I wasn't really committed to it. Not actually taking it as seriously as I should of" Nicole, (Nicole, personal communication, April 7, 2015). As the level of difficulty in the music rose and the more frustrating it became, the less she enjoyed playing. This supports Eccles et al.'s (Eccles, 2005; Eccles et al., 1983, 1989, 1993; Eccles & Wigfield, 1995; Wigfield & Eccles, 2002; Wigfield et al., 1997) findings that individuals choose to participate in activities they enjoy and at which they believe they will be successful. As neither of these was true for Nicole any longer, they contributed to her discontinuation.

Gates (1991) would suggest that Nicole was a recreationalist, who stopped playing when playing required more effort than she was willing to give. However, the combination of the three factors described above motivated her discontinuation in different ways. Her negative experiences in band and her frustrations with playing changed her values for and perceptions of band, suppressing her desire to participate as intrapersonal barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). However, these factors might have remained constraints that she could have continued to navigate without the impact of the negative influence of her friends' decisions not to participate. It appeared as though Nicole was willing to endure the negative experiences as long as her friends were in band, but, when they left, she did too. The influence of her friends provided a social barrier, because they were no longer supporting her involvement, which affected both her preference and participation for

band participation (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993).

Ignacio

Ignacio was a 15-year-old Hispanic/Latino male in his freshman year of high school who indicated his grade point average category was 2.1 and 3.0. He lived with his mother, a college graduate, and received free or reduced school lunch. Ignacio's father also graduated from high school. Ignacio first learned to speak Spanish, and he took English as a Second Language classes at school for four years. Ignacio was a short, young man who wore his dark hair spiked in the front and had the youthful look of a first-year high school student. He was dressed in jeans and a light brown, long-sleeved shirt. Ignacio was very polite and reserved upon our greeting, but spoke very freely, once we settled into our chairs and started talking.

In elementary school, Ignacio participated in general music classes and joined band in the fifth grade. He originally intended to play percussion instruments, because he had "always like[d] to bang on things" (Ignacio, personal communication, April 7, 2015). However, when he discovered that one of the other students with whom he did not get along was going to play drums, Ignacio decided to play trumpet instead. Because the trumpet had three valves, he thought it would be easy to learn, but discovered that it was difficult in the early stages. He continued to play through middle school, when he joined the jazz band and received awards for his solo playing at festivals. As a high school student, he started his first year playing in the school marching band, which was required of all band students. He completed band camp, and, when it came time for the competitive part of the season, Ignacio discovered that the competitions were all out of

town on the weekends, which conflicted with his job, so he discontinued his school band participation. What made Ignacio's situation intriguing was the fact that his job was working as a gigging musician, on a traditional school band instrument, performing in a *banda* that he started with his cousin. A banda combines elements of a traditional Mexican band with a rock band to create a distinctive kind of popular music. Three themes emerged from his interview: aspiring professional musician, inspiration and support, and musical paradox.

Aspiring professional musician. Ignacio was heavily involved in music outside of school, where he had a regular gig playing trumpet. When Ignacio was a seventh grader, he and his cousin started a traditional Mexican band comprised of mostly younger musicians, which deviated from the traditional structure of these ensembles. Ignacio said, "Because mostly, in Hispanic history, there's pretty much only older men that play in bands, like famous ones. To me, I don't even know if there's any kid bands or anything like that" (Ignacio, personal communication, April 7, 2015). He described how they ordered musical arrangements from Mexico "for $20 a piece…but it came with every part: clarinet, trombone, trumpet, drum, tuba. It came with everything" (Ignacio, personal communication, April 7, 2015). The band started started rehearsing every day and soon landed their first gig, where they performed for about 250 people. Ignacio described the exhilaration of playing for a crowd under the lights and seeing everyone dancing. Unfortunately, soon afterward, a couple of the musicians left the group and rumors circulated that more would follow, so Ignacio and his cousin dissolved the band.

It was not long before Ignacio found a YouTube video of a banda in Mexico that had keyboards, trumpets, trombones, and bass guitar. He and his cousin contacted a

friend from their former traditional group to experiment with the sound and were pleased when they sounded very much like the group they watched on the internet. During the year they have been together, the banda has become popular, touring regionally in the summer. The group played banda arrangements purchased from Mexico and had memorized 75 songs for use in performance. The group rehearsed three days each week for two-and-a-half hours and had only a few performances during the winter, but this schedule became more active starting in March. From May through September, the group performed every weekend, and toured regionally during the summer months. For their upcoming summer tour, they planned to extend their travels beyond the Midwest, booking jobs in regions as distant as Texas and California.

Ignacio explained that most of the performances were on Saturday nights, and the group often practiced on Saturday mornings in preparation. This was the source of his scheduling conflict with marching band, which competed on Saturdays. He explained his conflict:

> We had our gigs on the weekends too, so sometime I couldn't participate in those because we had already booked those [jobs] since a long while back…and we couldn't turn them down because they had already paid the money for us. When someone pays something, you have to do it no matter what, because they already paid you. This is the reason why marching band was kind of a bother for me. It was in the way, so I had to move it aside so I can focus on my band. (Ignacio, personal communication, April 7, 2015)

Even though he really enjoyed playing in the marching band, he discontinued his involvement after the first few weeks of school. When Ignacio talked about honoring

contracts, particularly the financial aspects of these agreements, he sounded like a businessman taking care of his entrepreneurial enterprise. He was incredibly proud of his banda and took his and his bandmates' contractual obligation to their clients seriously.

For Ignacio, his membership in the banda was part of his musical identity and a vehicle for achieving his goal of a music career. It was clear that his membership in this group was his highest priority, and it was tied clearly to his career goals. He said, "That's getting me into the future, that's also people getting to know me. That's also, for me, also becoming a famous person, a famous musician. Helping me in the future" (Ignacio, personal communication, April 7, 2015). This prioritization of values influenced his participation when structural barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993) associated with the school band program arose.

Paradox. Unlike many of the other school music nonparticipants who cited negative experiences with school music, held low self-perceptions of their musical abilities, or did believe music was particularly valuable, Ignacio was an exception. He had a positive attitude toward school music, strong musical values, and confidence in his musical abilities. He described his school music experiences in positive terms and enjoyed being part of the school band. He particularly enjoyed the relationships he established with other band members, whom he found to be helpful and supportive. This made it difficult for Ignacio to discontinue his involvement, "I had to think twice. It was kind of hard for me to get out of it too, because I have so much fun with my [school] band members" (Ignacio, personal communication, April 7, 2015).

Ignacio shared that he was thinking about joining the band again next year, but that he would only return if it did not conflict with his banda. He specifically mentioned

a desire to participate in the school jazz band, just as he had in middle school. Ignacio described his experiences playing in the auditioned jazz band at his school, which won awards at competitive festivals and the recognition he received as a soloist. He felt validated as a musician when other directors he did not know asked his name and complimented his jazz playing. When Ignacio talked about the possibility of getting involved again, he said, "If I could go back to it without conflicting with anything else, I would totally go back to the school band. I really enjoyed it at first" (Ignacio, personal communication, April 7, 2015). This comment suggested that something about the experience might have changed for him, which made me wonder if he ever intended to return.

Throughout the interview, Igancio spoke positively about his band experiences, which made the one negative interaction remarkable. Ignacio had talked to his band directors about the schedule conflicts with his banda, but it was a conversation regarding a social event that Ignacio described in detail. He had agreed to serve as one of the male dancers for a friend's *quniceañera*, in Mexican culture, a girl's 15th birthday party celebrated as a rite of passage into womanhood. Ignacio said that he had informed his band directors in advance that this event conflicted with a competition on the marching band schedule and that he would be unable to attend. However, as the time drew closer, the directors suggested that he could drive himself to the marching band event so that he could return to Tremont for the quinceañera. Ignacio explained that driving presented a financial hardship because of the gas money required (the competition was two hours away) and the expenses related to the party. His facial expression and tone conveyed disappointment when he described the directors' reactions, "It looked to me like they

didn't even care, like they didn't even listen" (Ignacio, personal communication, April 7, 2015). This account hinted at a change in the relationship with the directors that led me to question whether Ignacio would ever go back to the school band.

Inspiration and support. The biggest musical influence, inspiration, and support for Ignacio was his cousin, who had been in the music business for 12 years and played trombone in the banda. When Ignacio described his career aspirations, he described how he wanted to be a performer, like his cousin. This man served as a teacher, mentor, and colleague for Ignacio, and taught him how to play trumpet while he was also taking lessons in school. Ignacio's mother supported his musical ambitions by driving him to his cousin's nearly every day after school. When she was unable to do so, aunts and uncles provided transportation.

Ignacio recognized the importance of his familial support system, "I would have done anything to just keep going. I think my family helped me out with that. They really understood me on what I like to do. They just went with me" (Ignacio, personal communication, April 7, 2015). When Ignacio talked with his family about discontinuing his participation in marching band, his family encouraged him to consider how that decision could result in the loss of potential scholarship money. They also told him that he would have to talk to the band directors and school counselor, but that the decision was ultimately his. Ignacio also described his friends as supportive of his musical endeavors, recognizing his talent and even asking if he intended to join the school marching band. Ignacio credited the support provided by his mother in his musical pursuits, which confirmed the findings of Simpkins et al. (2012) regarding the importance of mothers in shaping their children's choice behaviors. He also enjoyed the support of

"significant others" (Corenblum & Marshall, 1998), such as his extended family, who facilitated his musical participation.

Carly

Carly was a 15-year-old White/Caucasian female in her sophomore year of high school who indicated her grade point average category as 2.1 and 3.0. She lived with both of her parents, who were high school graduates, and she did not receive free or reduced school lunch. Carly was a petite young lady with straight, shoulder-length, blonde hair and a sprinkling of freckles. She was dressed in jeans and a light blue sweatshirt on the day we met and greeted me with a broad, kind smile. Carly seemed eager to talk with me, and her bubbly personality was immediately evident as we got settled. Carly's survey responses indicated that she did not learn to play an instrument or sing in school, despite her involvement in music in elementary and middle school.

Carly enjoyed participating in music during elementary school, and she particularly enjoyed playing recorder. When she arrived at middle school, she joined the choir and sang for two years. Carly described her experience and regret:

> I started to not take it very seriously because it was choir, and it was just the middle school phase where everybody's rude to the teacher and stuff, but it was fun. I wish I would have taken it more seriously. (Carly, personal communication, April 6, 2015)

Carly took the middle school general music class for two years, in which she played piano and learned guitar. She was a member of the track team in middle school but, since high school had only played tennis as a school activity.

Carly did not participate in any music classes in high school, primarily because she was overwhelmed by all the credits she needed, and she did not really know what classes to take. Carly told me that, since then, she has come to understand the requirements better but was unsure about what music classes were available, because they were not listed on the registration sheet. She said, "I'm really shy about singing in front of people, but I would love to sing with the choir or something" (Carly, personal communication, April 6, 2015).

Carly started learning piano when she was in the first grade, taking lessons from a neighbor until seventh or eighth grade, when her teacher retired. Her father, a guitarist, encouraged her musical study and often tried to convince her to sing with his band on songs by artists like Pink Floyd, but she was too afraid to sing in front of people. Carly still plays piano by herself or with friends for fun and also likes to sing alone or with her friend, Ted. Carly played piano regularly and described the therapeutic value it holds for her, saying, "I would say [I play] at least once a week. It just takes my mind off everything and gives me a sense of feeling in control of everything and being able to express myself throughout playing" (Carly, personal communication, April 6, 2015). The therapeutic value of music was one of three themes to surface in Carly's narrative, along with identity as a musician and her regrets.

Regret. Carly regrets that she did not take her middle school choir experience more seriously and that she discontinued her involvement in choir after seventh grade. When I initially asked her why she decided not to continue with music in school, Carly said that she just did not register for it as an eighth grader – but was not really sure why – and decided to take other classes, like general music, instead. Later in the interview, she

confessed that some of her friends had left the choir and that she was more comfortable in the ensemble when they were there. Carly thought her middle school choir teacher was "the coolest music teacher I ever had for music classes. The kids were so disrespectful in there, and they would often tell her choir was stupid and they wouldn't participate in the songs that we would sing" (Carly, personal communication, April 6, 2015). Carly confessed that there were times when she, too, did not participate in class. The expression on her face made it appear as though she regretted her behavior as she told me she felt the teacher gave up on trying to get the students excited about singing.

Carly actually expressed a desire to join the high school choir, because she would "love to sing with the choir" (Carly, personal communication, April 6, 2015). However, because she did not really know many of the students in the choir and she was shy about singing in front of other people, she admitted, "I feel like it would be something that I would have to gain a lot of courage to do" (Carly, personal communication, April 6, 2015). These reservations, along with her low self-perceptions of singing ability, constituted intrapersonal barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993) that affected her preference for the school choir in a manner that served to obstruct her participation.

Practicing musician. Even though she was no longer taking lessons, Carly continued to play piano, which she really enjoyed. She also sang by herself and played piano and with her friend Ted, though she said she "would sing very quietly to myself kind of, and he would try to get me to sing louder" (Carly, personal communication, April 6, 2015) due to her aversion to singing in front of other people. She and Ted liked to learn popular songs on the piano, especially songs by Coldplay. Carly admired Ted's

musical skill and ability to play by ear, and he would teach her to play songs once he had figured out the notes. Ted served as a source of encouragement and musical inspiration and was clearly a trusted musical partner with whom she was comfortable and enjoyed making music. Carly even introduced me to Ted in the school lunch room one day toward the end of data collection, and he confirmed their musical collaboration. Ted had also chosen not to participate in music at school.

Carly engaged in some song writing and transcribing, as well. She described how she attempted to notate "The Star Spangled Banner" with the intention of singing it for her family. She joked that her notation was "the worst thing I've ever seen…. It was probably a sin the way I wrote it because it was so bad" (Carly, personal communication, April 6, 2015). Carly also told me that she would sometimes write songs but again downplayed her ability when she made light of her song topics: "they would be about grass or something" (Carly, personal communication, April 6, 2015). These activities seemed to be the work of someone who enjoyed music beyond performance and contradicted a statement Carly made earlier in the interview when talking about her reasons for not continuing school music. She had said previously, "I guess I didn't think music was important…I didn't really think I had a future in music" (Carly, personal communication, April 6, 2015). This suggested that perhaps she did not feel she had a future in the school choir or that she was not as connected to school music in the same way she was in her personal music-making outside of school.

Music as therapy. Carly referenced her use of music, both listening and performance, for therapeutic reasons and mood regulation, confirming findings by other researchers on the use of music by adolescents (Harland & Kinder, 1995; North et al.,

2000; Saarikallio, & Erkkilä, 2007). She talked about Coldplay's music being "kind of serious and dark" (Carly, personal communication, April 6, 2015) and her ability to relate to their music more than the "too happy music" (Carly, personal communication, April 6, 2015) she sang in school. She expressed how she used music to relax, to relieve stress, to express herself, and to escape the realities of daily life. Carly said, "It just takes my mind off everything and gives me a sense of feeling in control of everything and being able to express myself throughout playing" (Carly, personal communication, April 6, 2015).

Ironically, the act of playing piano was a release for Carly, even if she was not actually playing a specific piece of music. She described how she would put on headphones when listening to a song, turn up the volume on her electric piano, and press keys and pretend she was playing the song she was hearing through the headphones. Carly explained that this activity really helped her to relax. It was interesting that Carly chose to return to an activity, music, in which she did not really envision herself having "a future."

It was clear that Carly was most comfortable with music and being musical outside of school, suggesting that her personal perceptions served as a strong intrapersonal barrier (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993) to her school music participation. However, there were also structural barriers in the school music program in terms of the kinds of music studied, the perceived difficulty of the music, and the focus on performance that also influenced her decision not to participate. For Carly, the decision of her friends to leave music likely also influenced her own participation, presenting an interpersonal barrier. I was curious

about whether or not she would find the courage to rejoin the ensemble without friends to support her, or if she will be able to convince Ted to join choir, too.

Kahlil

Kahlil was a 17-year-old Black/African American male and high school senior who indicated his grade point average category as 2.1 and 3.0. He did not know either of his parents' level of educational attainment. He lived with his mother and received free or reduced school lunch. Kahlil was a young man of medium height and build, wearing a red, hooded sweatshirt and a loose-fitting pair of black jeans. He wore his dark hair cropped close to his head and had a light goatee framing his mouth. Kahlil's survey responses indicated that he had never learned to sing or play an instrument at school with a music teacher, yet he did participate in elementary music and sang in the choir during the eighth grade.

Kahlil explained that he took elementary music because it was required, but chose to take choir in middle school. When he reached high school, he was more concerned about taking the classes required for graduation, saying, "I wasn't even thinking about a music-type class" (Kahlil, personal communication, April 6, 2015). Before Kahlil moved, he participated in a summer drill team for two years that competed and performed actively in the metropolitan area where he once lived, as well as in surrounding states. He played the tenor drums in this group, but was unable to continue in Tremont because there were no drill teams in the area. He described his experience in the group: "Like, y'all get together, think of a song that's a popular song, or any type of song, and actually try to work with just a limited number of instruments" (Kahlil, personal communication, April 6, 2015).

Kahlil indicated that he had moved frequently throughout his childhood, and had just moved to Tremont at the beginning of the school year, making his senior year the first and last in Tremont. He described the move as his biggest obstacle participating in school music at Oak Valley, because he was a shy person and did not know anyone, which made him feel uncomfortable about taking a music class. Kahlil felt that if he had a friend in music, he might have taken a music course. However, his primary concern was graduating from high school, which drove his decisions regarding his school schedule. The three themes that emerged from the interview with Kahlil were his high school graduation goal; musical interests, not priorities; and musical eclecticism.

High school graduation goal. Kahlil spoke frequently about his goal to accumulate enough credits and complete the courses required to graduate from high school. To meet this goal, he said that he really did not perceive music courses to be necessary. Kahlil described how his family helped to "push me and help me to go through school" (Kahlil, personal communication, April 6, 2015). Having time for homework was also a priority related to this goal, and he talked about scheduling a study hall if he had after-school activities, such as sports or helping his mother at home, so he could be sure that he would have time to complete his homework.

Kahlil shared how he actually had more credits than required for graduation from Oak Valley, but took extra classes this year to be sure he would have enough to finish school at the end of the year. He seemed to be concerned that the move to Tremont this year might have resulted in a loss of credits in the transfer. Kahlil had also enrolled in two summer school classes, which he described as easier versions of the classes in which he believed he struggled, "It was English, because I'm bad at English. I was trying to get

the easy way to take English, to help….You can get it over with easier than taking it in school" (Kahlil, personal communication, April 6, 2015). This choice also seemed to be motivated by his desire to successfully complete all of the courses required to meet his goal of becoming a high school graduate. Kahlil's personal goals of graduating high school and the value he placed on that achievement were a higher priority than taking music in school, evidence of a hierarchy of values (Eccles, 2005; Eccles et al., 1993; Wigfield et al., 1997) that presented an intrapersonal barrier (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993).

Musical interests, not priorities. Kahlil pursued a number of musical activities outside of school, most of which focused on the kinds of music making that were not offered as part of the school music curriculum. He played instruments by himself or with other people, created music using technology, and enjoyed "scratching" as a DJ turntabalist. Kahlil's brother taught him to play songs on the piano and provided opportunities for him to create music. Kahlil spoke about his brother's musical influence:

> My brother is a music producer, too. He makes beats and stuff. He got a regular piano, he got electric pianos and other types of instruments, so he records them. I think that's interesting, because I like making my own type music. (Kahlil, personal communication, April 6, 2015)

Kahlil did not have a high self-perception of his ability as a singer and was most interested in world music, wanting to learn about different types of music and instruments, as well as how other cultures used music. He had an opportunity to take one such course at his last high school, but called his decision to take a physical education class a "hard choice" (Kahlil, personal communication, April 6, 2015), because he also

wanted to run track. He also shared that sports, family responsibilities, and other interests, such as computer design, were things he prioritized above music. This suggested that a rank order of values for various activities influenced his decision not to take the music course (Eccles, 2005; Eccles et al., 1993; Wigfield et al., 1997).

Kahlil valued the role of student choice in making decisions regarding the materials and activities in music courses, stating that if he had more opportunities to choose, it might have helped to maintain his interest. He was interested in creating music and making beats using *Fruity Loops* (music production software; now called *FL Studio*) or *Garage Band* (music creation software), and he identified music technology as a potential school music course for students like him. Kahlil said, "I like making my own type music. I think that should be a class, too, for people who don't use instruments and who [are] better on computer software music" (Kahlil, personal communication, April 6, 2015). Kahlil might not have participated in school music because the courses that interested him were not available, a gap between his musical interests and school music that presented a structural barrier (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). Given his focus on meeting the graduation requirements, however, it was more likely that school music was just not a priority in meeting his primary goal.

Musical eclecticism. Of all the interview participants, Kahlil had the broadest musical interests, and, throughout his interview, he mentioned a number of specific styles and genres of music. He also shared the largest number of ideas for new school music classes, which will be discussed in the cross-case themes. Kahlil spoke frequently of his interest in new types of music, instruments, and creative music making. He specifically

mentioned his interest in rock, hip hop, and R & B (rhythm and blues) music, as well as world music:

> I wanted to know how people use music around the world, or instruments, and stuff. It's different around somewhere else like in China or Germany…. Like, how music started in different parts of the world. I think that's just interesting to me. (Kahlil, personal communication, April 6, 2015).

Kahlil's description of his elementary school music classes, in which he learned music from various cultural traditions, suggested that his appreciation for this kind of music might have a connection to his previous school music experiences.

Kahlil liked instruments like piano and drums but also enjoyed string and wind instruments. "That's something I don't want to get major into, but I always wanted to learn how to play it" (Kahlil, personal communication, April 6, 2015). This comment suggested an interest in gaining a little playing experience on a broad range of instruments, rather than a depth of experience to master a single instrument. Kahlil also enjoyed making his own music, likely influenced by his brother and his experience in the drill team. This variety of musical interests, along with a recognition that his interests were different from those of his friends, suggested a connection to his value on basing the choice of music for study on student preferences. He frequently spoke about the importance of learning a wide variety of different types of music in school:

> I'd probably do different types….You know, you do English. You learn about different stuff throughout the year. [Do something] Like that, as a music…everybody don't like the same music, so each two weeks we do a

different type of music so people would be interested. (Kahlil, personal communication, April 6, 2015)

Trenton

Trenton was a 16-year-old, White/Caucasian male who was a junior in high school, identifying his grade point average category as 3.1 and 4.0. He lived with both of his parents, who were high school graduates, and did not receive free or reduced school lunch. Trenton was a slender boy of medium height with light brown hair that was swept to one side over his forehead, just above his rectangular glasses. He wore a royal blue, long-sleeved shirt and jeans and settled comfortably into the chair to talk. Trenton indicated that he did not learn to play an instrument or sing at school, though he participated in music during his elementary and middle school years.

Trenton enjoyed his elementary music experiences and liked his school music teacher, who allowed students to "hang out" and play games in her classroom before school started each morning. When he was in the fourth grade, he had a lead role in the school's Lewis and Clark musical, saying, "…the teacher forced me to be Lewis, so that wasn't an option. I wasn't a hundred percent comfortable with it, but I got over it" (Trenton, personal communication, April 8, 2015). In the seventh grade, he took the general music class, but did not enjoy it because the course focused on using computer technology with only limited time playing instruments. Trenton's favorite unit of the class was one focused on guitar, which he had learned to play outside of school. He participated in choir in the eighth grade and enjoyed the class, primarily because "there was nothing strict about it. There was a fun side to it" (Trenton, personal communication, April 8, 2015).

Trenton was a guitarist who had an active musical life outside of school, pursuing a number of different interests. He plays guitar, bass, and drums by himself or with friends in a garage band, wrote songs, created music using technology, and sang by himself or with others. Trenton started learning to play the guitar a few years ago when his father bought a Martin acoustic guitar. He started taking lessons at a local music school, the Academy (focused on guitar, piano, drums, and popular music bands), that really influenced his view of music:

> It's a really nice place. It's really positive. It's all about music. There are guitars everywhere, instruments everywhere, different kinds of music everywhere, different kinds of people. That was really a positive effect on how I saw music. That just kind of propelled me towards learning to play and making me want to play. (Trenton, personal communication, April 8, 2015)

Motivated by the positive experience in his first lesson, Trenton played every day at home, and, after learning his first song on guitar, he said, "It kind of just shot forward into an uncontrollable urge to just create music" (Trenton, personal communication, April 8, 2015). After approximately six months of lessons, Trenton decided he could learn songs on his own and was concerned about developing his own personal style of playing. He said, "I didn't want any outside influences like a mentor really kind of messing with where my music was going" (Trenton, personal communication, April 8, 2015). Trenton purchased his first electric guitar, an inexpensive model to fulfill his "burning passion for electric guitar" (Trenton, personal communication, April 8, 2015). Shortly after upgrading to a new guitar and acquiring a new amplifier, he met Mitchell, a guy in the school band program who also played guitar. Together with Mitchell's friends, who

played bass and drums, they formed a band. The group played together whenever their schedules allowed, which was not often, since they were all busy with school and other activities. Trenton's favorite music to play was funk, rock, psychedelic funk, and alternative rock. He counted the Red Hot Chili Peppers, Pearl Jam, Jimi Hendrix, and Nirvana among his favorite artists. His strong musical identity as a self-taught guitarist was the first of three themes that emerged from Trenton's interview, along with philosophical differences and formal versus informal music learning.

Self-taught guitarist. Trenton had a strong, highly evolved musical identity and connected on a deep, personal level to music. He had been playing guitar for about two-and-a-half years and was very proud of the fact that he had cultivated his own style as a self-taught musician. He credited his mentor with igniting his passion for playing, and he spoke often about the personal connection he felt to both his teacher and the music they created. It was clear that his experience in those lessons and at the Academy was positive, influencing his thinking about music and music learning. In talking about his desire to develop his own style, Trenton said, "I can learn basic songs on my own…I know the gist of it…I want to learn how I play, how I like music, and at my own pace" (Trenton, personal communication, April 8, 2015). He valued the ability to make all of the decisions regarding his musical learning but acknowledged that his self-taught approach had drawbacks. He expressed a desire to learn scales and other "articulate, in-depth stuff that I either would learn wrong or didn't learn" (Trenton, personal communication, April 8, 2015).

Trenton was a devoted guitarist who played every day in his basement – even if only for just a few minutes – and spoke about how he would rather dedicate his time to

guitar than any other instrument. He described the feeling that he got whenever his parents or friends complimented his playing: "It's a huge self-esteem boost. I want to play more, I want to play for people, it's just like a big rush" (Trenton, personal communication, April 8, 2015). He also expressed his belief that live performance was about connecting with the audience, sharing how great it felt when he performed in a band and that was happening.

As I listened to Trenton talk about music and how it resonated with him on such a personal level, it was hard to remember that he was a junior in high school. However, having been solely in charge of his musical choices for most of his musical life, this level of maturity was not entirely surprising. He chose which artists he would study and which songs he learned, while also creating music in his own style; he was playing and making music that was personally meaningful. I pictured him a few years from now, as an adult, still playing every day, perhaps mentoring an aspiring guitarist, and I could imagine him talking about how it was "all about the music, man."

Philosophical differences. Trenton was highly critical of school music, particularly the band program, and explained that his views on music were largely shaped through his own musical learning experiences. Trenton described how his father shared music he enjoyed, which was highly influential in Trenton's musical development. Trenton's father also communicated his belief that music was a very personal expression and that "there's no such thing as, like, sad or bad music because all of it to someone else is fun, or beautiful, or interesting" (Trenton, personal communication, April 8, 2015). The idea of music as a personal expression formed the basis of Trenton's comparisons

between music inside and outside of school. Trenton's friends who participated in the band program also influenced these beliefs, but not in a positive manner.

Trenton's philosophical disagreements with the band program centered on three points. First, he believed that the band program should be about the music, not about the social element or getting an "easy A," two of the arguments that had been used to encourage him to join the school band. Trenton said, "I can get good grades without band, and I can hang out with friends without band" (Trenton, personal communication, April 8, 2015). Second, Trenton described school music as being "automatized" (Trenton, personal communication, April 8, 2015), in contrast to a creative endeavor. He stated that his personal preference involved creating music rather than reproducing someone else's, even though he enjoyed learning to play songs by his favorite artists. Third, Trenton felt that school music focused more on playing the music correctly than on enjoying the act of playing music. Trenton explained that his band friends did not talk about enjoying the music they were playing, and that, if they had, it might have made a difference in his opinions regarding school music. Trenton compared performances of his favorite artists to those of the school band. In talking about the Red Hot Chili Peppers, he said:

> The music I enjoy, when I watch people…play it live, and then just see how much they're into it, or what they feel when they play it, and then compare that to what people do when they play [school] band. There's a big difference in energy levels with both of them….They're [Red Hot Chili Peppers] just filled with so much energy and happiness. They make mistakes, but it's just that they love what they're doing. They love music….and with [school] band, it just feels wrong when

> it comes…more like a factory where it's just this, this, this "in line," you can't be creative. There's just not a lot of wiggle room for being who are and what you want to be. (Trenton, personal communication, April 8, 2015)

Formal versus informal music learning. Trenton also described several aspects of the band program at Oak Valley that he believed presented obstacles to joining. He explained that the school music program did not currently have any courses offering instruction on instruments of interest to him. Trenton said that the only ensemble opportunity for him would be the jazz band, but he did not enjoy playing jazz, and in addition, there were a limited number of spots for guitar players. He respected the guitarist in the top jazz band as a player and, while he could play bass, he did not want to devote the time it would take to become proficient enough to play in the jazz band. The auditioned jazz band at Oak Valley also met every day before school, and Trenton described this time commitment outside of school as a barrier, given his other school responsibilities and a part-time job that helped him pay for his car. He thought that the teachers took the music making process too seriously, that the tone was more professional than personal, and that they did not seem to be passionate or excited about their work. Trenton also did not like the idea that the teachers appeared to make all the decisions regarding repertoire and the rehearsal, which was the opposite of his own musical experiences outside of school.

One other obstacle for Trenton in the structure of the school music program was his perceived lack of a personal connection between the school band directors, their students, and the music. He preferred the one-on-one structure of his guitar lessons with his mentor:

> I felt it was more of a personal connection with, not only music, but the teacher feels one-on-one. Obviously, they can't do that with band, but I definitely think they could still have some sort of personal, more fun factor to it other than just, like, sitting down and playing music and being serious and looking formal and all that. (Trenton, personal communication, April 8, 2015)

Whether any of these perceptions of the school music program were true, it provided an interesting perspective about how nonparticipants might view the program and interpret the comments made by peers who are members. While the program structures that Trenton described provided structural barriers to his school music participation, he also experienced strong intrapersonal barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). Trenton's musical values and his appreciation for his primarily self-taught mode of learning presented major barriers to his participation. He also expressed negative perceptions of the music teachers and the manner in which they went about their work that might have presented an interpersonal barrier (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993), further influencing both his preference and participation. Even if Trenton had liked jazz and wanted to join the jazz band, his personal musical convictions were so strong that he may have had a difficult time "selling out" and joining the school music program.

Olivia

Olivia was a 17-year-old, White/Caucasian female in her senior year of high school who indicated her grade point average category as 3.1 to 4.0. She lived with both of her parents, who were high school graduates. Olivia did not receive free or reduced

school lunch and had never participated in school music. Olivia was a tall, slender girl, dressed in a pair of jeans and a sweatshirt advertising a local college with her wavy, red hair falling over her shoulders on the day we met.

Olivia moved to Tremont as a junior from Arkansas, where the school she attended did not have a music program and, therefore, no opportunity to participate in musical activities. She explained that, after she moved, she did not know anyone and wanted to focus on her academics and on adjusting to her new school during her first year. Olivia decided to continue participating in sports she had played previously, as part of the volleyball, basketball, and track teams. Even though she was not enrolled in music classes, she had many friends who were involved in the music program. During her first year at Oak Valley, she developed a relationship with her boyfriend's sister, Jillian, who was in the school choir. Jillian would become a singing partner and a cheerleader, encouraging Olivia to join choir.

While Olivia did not participate in music at school, she pursued musical interests outside of school. Olivia's cousin gave her an acoustic guitar that she had received from her grandfather but was no longer playing, and Olivia started to "mess around with it sometimes" (Olivia, personal communication, April 8, 2015). Recently, she considered selling the guitar, because she no longer played. She had also stopped writing songs, an activity that she used to do for fun. Olivia liked to sing by herself and with friends, which was one of three themes that surfaced in her account; the others were school music not an option and family values.

School music was not an option. Olivia was the only interview participant who had never had an experience with music as part of her schooling. She explained that the

school she attended through her sophomore year was small, with limited course choices and none in music. When she moved to Tremont, Olivia had the opportunity to participate in school music for the first time, but she decided against it, partially due to her lack of previous formal choral experience:

> I didn't start as a freshman. I don't know, I felt like maybe I shouldn't do it…I'm like, too far into high school to even start. I'll just keep singing on my own just for fun, instead of make it like a school activity. (Olivia, personal communication, April 8, 2015)

During this first year at Oak Valley, Olivia developed a strong friendship with Jillian, a member of the top auditioned choir at Oak Valley who was also active in musical theater. Jillian became a big influence on Olivia and encouraged her to join the school choir since she enjoyed singing. At that point, Olivia was looking ahead to her senior year of high school and making choices regarding her coursework. She explained that, as a senior, "I just didn't see the need to be part of something I hadn't been doing for my whole high school career, so I continued playing sports instead" (Olivia, personal communication, April 8, 2015).

Olivia had a positive perception of school music – "It's awesome. I just never got to do it" (Olivia, personal communication, April 8, 2015) – and the choir program. She came close to joining choir after hearing Jillian sing with a guitarist at a summer camp, expressing her desire to do something similar. Jillian again tried to convince her to consider choir, an attempt that was nearly successful. Olivia described why she ultimately decided not to join:

> I just started thinking, because she's really good and then I just started thinking we sing all the time, and I get compliments all the time so maybe I should try it, but then I was like, yeah. Once again, I told myself 'never mind.' (Olivia, personal communication, April 8, 2015).

Even though Olivia believed she was a good singer and had the support of a musical friend, she decided that engaging in vocal music for her last year in high school was not worthwhile. For Olivia, her personal evaluation of the usefulness of singing for choir in one year, combined with her previous lack of musical experience in school and her perception that is was too late to start, presented intrapersonal barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993) to school music participation. These factors intervened between her desire to sing and her participation. Eccles (Eccles, 2005; Eccles et al., 1993; Wigfield et al., 1997) posited that students made activity choices based on the options that were available to them, and it seemed this might have been true for Olivia. Having had no previous opportunities for school music participation, it did not appear to be a viable option for Olivia in her last year of high school.

Singer self-identity. Olivia described throughout the interview how she sang "all the time" (Olivia, personal communication, April 8, 2015) outside of school and the important role that music played in her life. She described how music was woven throughout her daily activities and how she started her day singing:

> In the shower, when I wake up in the morning. My alarm is Pandora [a music streaming service] so it plays music. I always listen to music. My mom will yell

at me. She's like, 'Turn it down." I'm like, 'No, I'm jammin'.'…She knows I listen to music all of the time. (Olivia, personal communication, April 8, 2015)

Olivia also mentioned that she sang a Carrie Underwood song in the middle school talent show and sang in the church choir in high school in her former community. She also described how she used to be nervous singing or talking in front of people, but that went away when she decided she was "going to be myself" and "[break] out of my shell" (Olivia, personal communication, April 8, 2015) around the time she was 15 or 16. She also regularly sang with Jillian for fun, and it was clear that while Olivia valued music, the act of singing, for her, was primarily recreational. It was interesting that Olivia equated the work that students put into school music with the training that she put into sports. This stood in sharp contrast to her descriptions of her personal musical activities, which were a regular part of her daily life, and those she perceived for students in school music.

Family values. Throughout the interview, Olivia referenced various familial values that might have influenced her own personal values and perceptions. Olivia said that her family had no musical background, as her parents were never involved in music. Olivia's sister was participating in music at the middle school level, and Olivia thought that she might continue taking music in high school. This observation suggested that her sister was taking advantage of an opportunity that was not available to Olivia as part of her own school experience. Even though she did not receive free or reduced lunch at school, Olivia talked about the barrier that cost presented for her family. She said, "We just don't have the money to. Like, they [parents] would rather invest in college and stuff instead of music that's for fun" (Olivia, personal communication, April 8, 2015). She

related her guitar experience to finances as well, which was deemed acceptable because it was free and she could access videos on YouTube to learn to play for no cost. Olivia's perception of her parents' ideas about music as a recreational activity may have influenced her own.

Olivia holds the values shaped by her parents as a priority over other things in her life, particularly in regard to her religious beliefs. Olivia described how her non-denominational Christian beliefs prohibited her from participating in weekend activities, "I can't do anything on Saturdays, from Friday night to Saturday night, and I didn't…part of it was because I would have to perform on Saturdays or Friday nights…so I decided not to because of that" (Olivia, personal communication, April 8, 2015). While she suggested this was a barrier to participating in music at school, this did not prevent her from participating in sports. Olivia explained that she simply did not participate in activities that occurred during those times. Olivia's values, shaped by her parents, had an impact on her activity participation, confirming the findings of authors who reported on the influence of parents in the formation of children's personal values (Davidson et al., 195/1996, 1996, McPherson, 2009; O'Neill, 2005; Simpkins et al., 2012).

Ibsaa

Ibsaa was an 18-year-old African male who was a junior in high school and indicated his grade point average category as 2.1 and 3.0. He lived with his mother and received free or reduced school lunch. Neither of his parents had finished high school. Ibsaa immigrated to the United States from Ethiopia less than two years ago and had only been at Oak Valley High School for only about four months. His native language was Oromo, and he learned to speak English from his sister and father, who had worked as an

English teacher in Ethipia. Ibsaa was in his second year of English as a Second Language classes, having progressed to level four.[4] He was a tall, young man with a medium build who wore his dark, curly hair short. The day we met, he wore a black, long-sleeved shirt and jeans and greeted me with a kind smile, speaking in a low, quiet voice. Since moving to the Tremont area, Ibsaa attended two different schools, but did not participate in the school music program at either.

In Ethiopia, Ibsaa took music classes in middle school, but he did not have the opportunity to learn to play an instrument. He started to play the keyboard in his church in Ethiopia when he was 15, learning from a pastor. Ibsaa learned to play by ear, "going through the song…just doing action" (Ibsaa, personal communication, April 6, 2015) and without the use of musical notation. He started playing at church for weekend services and for special programs. He was not currently playing music at his church in Tremont because of his job, which required him to work weekends. Ibsaa explained that he worked full time, approximately 36 hours per week, so that he could pay his living expenses, which did not leave him any time to participate in music. Ibsaa hoped to reconnect to playing keyboard through his church, where other members could help him. He was attempting to get some Sundays off from work in order to make this possible.

Ibsaa was a full-time high school student, in addition to his job, and had a positive impression of the school music program at Oak Valley. He said, "You know what? I am

[4] In the Tremont School District, the English as a Second Language program consisted of five levels, with students progressing through each level at their own pace. Upon entering the school system, students who spoke native languages other than English took a placement test to determine their starting level. Once students completed the last level of the program, they score at a specified level on the ESL assessment and test at the proficient level on the state standardized tests for reading and math to exit the ESL program.

jealous of here, because I don't get the chance to learn it [music]. When I see kids playing their music, oh God, I just want to play like that, please" (Ibsaa, personal communication, April 6, 2015). Ibsaa described the challenges that he faced in school as an immigrant student, which was the first theme to emerge from his story, along with family respect and prioritized obstacles.

Immigrant school experiences. Ibsaa was the only interview participant engaged in the ESL program during data collection, and, because he was new to the country, he provided insight into the school experience of immigrant students. He shared that he moved to the United States just 15 days before he was to graduate from high school in Ethiopia. He said, "I'm just going to say I graduate from high school, because I'm done my senior year and moved here" (Ibsaa, personal communication, April 6, 2015). Based on his school records, he was classified as a sophomore at Longville High School. He was 17 at the time. Ibsaa described the problems that he experienced in his first few months of school at Longville, where other students bullied him. He said, "I hate school at that time, even music…I just learn English a little bit. I just defense me from bullying" (Ibsaa, personal communication, April 6, 2015). Ibsaa started at the first level of the English as a Second Language (ESL) program, which took him a year to complete. The second level only took him about a quarter to finish. After Ibsaa moved to Tremont and enrolled at Oak Valley, he was re-tested and started at level four of five, which he was working through when we met for the interview. Ibsaa was very proud to tell me that he intended to graduate in another year-and-a-half.

Despite all of the challenges he faced in school, Ibsaa was positive about his school experience and seemed happy to be at Oak Valley. He believed he was moving

through the ESL courses more quickly than he would have at Longville. The Tremont School District's ESL services provided a variety of programs based on the individual needs of students, including English language development, sheltered instruction, immersion, and tutors (field notes, April 8, 2015). I was impressed that he seemed to be balancing his responsibilities at school and at his job and that he did not complain about either.

Parental respect. Ibsaa really enjoyed listening to music and country music was his favorite, even though none of his other family members cared for it. His father, however, did not like music and was uncomfortable when Ibsaa listened to music at home. Ibsaa had an opportunity to participate in music at Longville, even though teachers told him that most students started music in middle school. He explained that his parents needed to give permission for him to take music, but that his father would not do so. Ibsaa said, "He don't want [me] to learn any music because he hates music" (Ibsaa, personal communication, April 6, 2015).

Ibsaa shared that his parents had separated and that he had no support for music when he lived with both of his parents. He now lived with his mother, who was indifferent toward his interest in learning music and "doesn't really care" (Ibsaa, personal communication, April 6, 2015) whether or not he studied music. However, his family, and especially his mother, wanted him to pursue a doctoral degree, requiring at least eight years of university. Ibsaa explained, "In my country, you should respect your family decision" (Ibsaa, personal communication, April 6, 2015). This conflicted with Ibsaa's dream to be a country singer, which he would only consider after he fulfilled his family's wishes. When I asked what he wanted to study in college, Ibsaa told me he might want to

be a "brain doctor" (Ibsaa, personal communication, April 6, 2015). While I admired the lengths to which he would go to honor his parents' desires and the cultural traditions in which he was raised, I also understood that, in his culture, to do otherwise would be incomprehensible.

Prioritized obstacles. Ibsaa described other challenges he faced in his daily life, "When you come to the United States, like some really obstacles. Because of living, like working full-time…I work six or seven days…Pay my bill and everything" (Ibsaa, personal communication, April 6, 2015). Ibsaa was very interested in music and wanted to get involved in music at school, but ultimately felt that he could not, because he needed to work. Ibsaa had a friend who participated in music at Oak Valley who told him that sometimes she had musical events after school. When he heard this, Ibsaa commented that he knew he would not be able to participate in music at school, because he had to work after school. He missed having an opportunity to make music and said, "I'm still having interest to learning music more than I do anything. I'm really loving music but sometimes feel like I lost my music interest because I have been a long time without music" (Ibsaa, personal communication, April 6, 2015).

Ibsaa did not see participation in school music as a viable possibility, because he believed that such involvement would require time outside of school that he did not have. He based this on information from his friend who participated in school music and talked about her musical commitments after school. Ibsaa said, "She told me she's going to be late after school sometimes, until 4:00 or 5:00 sometimes. I was like, 'I cannot do that until 4:00 because I got to go to work and stay there every single day' (Ibsaa, personal communication, April 6, 2015). However, he thought that school music offered an

opportunity for all students to learn, while music outside of school was for students who could afford to have someone teach them. Despite this position, he stated that he did not think he could participate in school music due to his obligations outside of the school day.

Even though Ibsaa was highly interested in music and hoped to make a career of it someday, he experienced a number of obstacles to participation in music at school. His perception of the time commitment outside of school and his job presented structural barriers, while his father's refusal to allow him to participate functioned as an interpersonal barrier (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). These barriers making it difficult for Ibsaa to pursue his desire to make music through participation in the school music program. His priorities (e.g., respecting his family's goals for him) and the need to contribute to his household by paying his bills, suggested that the prioritization of his values motivated his choices (Eccles, 2005; Eccles et al., 1993; Wigfield et al., 1997). Recent research (Lorah, Sander, & Morrison, 2014) suggested that ESL students might be more affected by their socioeconomic status than non-ESL students in regard to the decision to participate in school music, which appeared to be true for Ibsaa. Ibsaa was willing to postpone what he wanted out of respect for his family, an honorable act by a respectful young man.

Thanh

Thanh was an 18-year-old Vietnamese male, a high school senior who indicated his grade point average category as 3.1 to 4.0. He immigrated to the United States when he was in the sixth grade and possessed minimal English language ability when he entered school in Tremont. Thanh took English as a Second Language courses at school

for three years, though he continues to speak primarily in Vietnamese with his family and friends. He lived with both of his parents, both of whom dropped out of elementary school, and received free or reduced school lunch. Thanh greeted me with a big smile on the day that we met, a young man of medium height and slight build who wore glasses and had a slight speech impediment. He wore a tan, long-sleeved shirt and a pair of nylon athletic pants that made a "swishing" noise as the heel of his foot moved up down in a sort of tic as we talked. Despite this extra energy, he did not seem to be nervous, but appeared quite happy to answer my questions and to share his experiences.

Thanh was born in Vietnam, where he attended elementary school and participated in an elementary music class in which he and his peers learned basic concepts, such as notes and "sometimes learn a song, and do that song over and over again for the whole semester" (Thanh, personal communication, April 3, 2015). Thanh emigrated to Tremont as a sixth grade student and enrolled in the general music class in middle school for one semester each year. Thanh said, "At that time, my English was not good. There was a music program in middle school, but I don't know very much, so I didn't enjoy it" (Thanh, personal communication, April 3, 2015). Through this music class, he learned to play instruments and to explored music technology.

Once he got to high school, Thanh started to notice the many different bands that provided opportunties for instrumentalists at Oak Valley. One of Thanh's good friends played clarinet in the band, which sparked his interest in learning to play instrument. He said, "Sometimes I go to his house and listen to him practice, and it sounded pretty cool. Then I went to some his [marching band] show, like, oh, that's cool" (Thanh, personal communication, April 3, 2015). When Thanh asked his friend if he could learn an

instrument too, his friend said that he did not think it was possible, because students started learning instruments in elementary school, so Thanh gave up on the idea of learning to play. Even though he did not know how to play an instrument, he would become a member of the marching band the next year, which is the first of three themes in Thanh's interview, marching band member, missed opportunity, and acceptance.

Marching band member. During his sophomore year, three of his friends who were in band recruited him to serve as a replacement for a student who had dropped out of the marching band after the season had started. Thanh described his role as that of a "horn carrier, instrument in a form" (Thanh, personal communication, April 3, 2015), or someone who marches and performs the drill movements in a field show, but does not actually play the instrument that he carries. Thanh said, "They were desperate" (Thanh, personal communication, April 3, 2015) and needed someone to march this unexpected, open position. As the summer band camp was already underway, it did not matter whether or not he could play the instrument, so he accepted the position. At the end of that season, the band student who marched next to him suggested that he should come back and join the marching band the next season. Thanh continued to carry the trumpet, marching but not playing, for the next three years.

When Thanh spoke about marching band, his eyes lit up, and he became incredibly animated and enthusiastic as he described his experiences:

> Basically, I kept learning the form, where to go, and how many steps to do it, but I don't play the instrument, because I don't know how yet. They just needed a person to stand there and march with the group so the forms look nicer, that's all….It was really fun, actually. We got to travel, and we got to interact with each

other, and we got to watch other schools' show in the competition. That was really fun. (Thanh, personal communication, April 3, 2015)

As a veteran marching band director, I was struck by how he talked about his experience. As he described his responsibilities and his enjoyment of the activity, he sounded and acted just like any of my former marching band students did when they talked about the activity they loved. He enjoyed the social aspect of group membership, the trips to competitive events, and watching other bands perform. The only thing he did not mention was a connection to the act of performing, even though he performed the movement. However, the fact that he did not play an instrument did not seem to cause him to feel any less a member of the ensemble, or to diminish the obvious pride that he felt as a part of that group. Thanh shared that he did learn about music from the people around him, and he even tried to play the trumpet the school provided for him a few times, "They teach me all how to blow air through it. I did make some sound, just a few times that I hit a really high note…Yeah, but that's only one note…and I never hit again" (Thanh, personal communication, April 3, 2015).

Despite the fact that he did not know how to play an instrument, Thanh's friends were influential in providing an opportunity for him to participate in the band. Thanh described his parents as supportive of his marching band membership as long he maintained good grades. He shared that his parents knew little about school, and less about the music program, but they encouraged him to take advantage of the opportunity if it was something that he was interested in pursuing.

Missed opportunity. The second theme, related to his experience as a non-playing member of the marching band was missed opportunity. Thanh had a deep

admiration for his friends who played instruments, and, while they were key to facilitating an opportunity for him to join the band, they also convinced him that it was too late for him to learn an instrument. When he was a freshman, Thanh asked his band friends about learning to play an instrument, and learned that they had started years earlier:

> I want to learn to play an instrument, but then all my friends say, 'You need to learn in elementary school to join the band.' I said, 'Oh, OK, I guess I will not join it. I'll just take another class." (Thanh, personal communication, April 3, 2015)

Therefore, while he had an intense interest in playing an instrument and valued the opportunity it might provide, he was unable to start because the school did not offer beginning instrumental instruction to students in middle or high school. Thanh said that the new band director (Mr. Hoffman) had suggested that he sign up for band, but, as a senior in his last semester, Thanh had no room in his schedule for the band class. This was yet another missed opportunity for Thanh in his quest to participate in school music.

Thanh also related how some of his other friends felt about joining the high school music program for the first time. He explained that some his friends were not interested in school music until they were sophomores or juniors but were intimidated by the students who had been participating since they were freshmen. He said, "So I don't want to be the one standing out so I'm not going to join, but they want to join...But they are fear, they don't want to feel like, treat like an outsider kind of thing" (Thanh, personal communication, April 3, 2015). Thanh's experience and that of his friends suggested that the sequencing of instruction in the school band program functioned as a structural

barrier in terms of joining for the first time as a high school student. At the same time, for Thanh, the music program structure was also a constraint that he managed to navigate in order to participate in band, although not in the way that he had hoped.

Acceptance. Even though he was highly interested in learning to play trumpet, because that was the instrument he carried in marching band, he accepted that it was not possible. There were other instances in Thanh's school experience when he described a passive approach to his learning. As a middle school student new to the United States, Thanh described how most of classes were required, so his counselor scheduled his classes for him. He accepted the schedule, partially because his English skills were limited: "When I get my schedule, basically, the only thing I look at is the room number…and go in there. OK, so this class we're going to learn about that. Just a guessing game" (Thanh, personal communication, April 3, 2015). When he could not participate in band as a freshman, he simply selected another class, but never sought out the band director to find out if he might be able to take lessons.

In spite of his aspiration to learn an instrument, Thanh seemed to accept that band was not an option for him at Oak Valley High School. His experience as a marching band member solidified this, as he said, "Instructional time is when we go over the music we already learned. I don't think there is time for a new kid to join. Learn from scratch" (Thanh, personal communication, April 3, 2015).

Thanh has still not given up hope that he will play someday, and he suggested he might take lessons in college. He frequently mentioned that he did not know how to play "yet," implying that he hoped to do so in the future. Thanh was an example of a student who would have participated in school music if there were a way to do so when he was

ready. Thanh did not participate in any organized musical activities outside of school, but did sing for fun by himself.

Presentation of Cross-Case Themes

After completing the within-case analysis, I analyzed themes across cases to determine points of convergence and divergence between the individual cases. This process resulted in the emergence of five themes: nonparticipant musicians, choice as a hierarchy of personal values, school music as a closed system, the power of personal perceptions, and a desire for student-centered pedagogy. The cross-case themes and their corresponding codes are illustrated in Figure 9.

Nonparticipant Musicians

When I selected school music nonparticipants for the interviews, the survey responses indicated that approximately half of the students participated in some kind of musical activities outside of school. Most of these individuals were singing or playing instruments for enjoyment, either by themselves or with friends, for a minimal amount of time each week. On the surface, it appeared as though these musical activities were recreational in nature. What was unexpected, however, was the richness and depth of the musical lives of the majority of interview participants.

The students who described the greatest involvement in musical activities outside of school were Trenton, Igancio, Carly, and Olivia, though they all had different uses for music. Trenton was primarily interested in cultivating his own musical style as a guitarist and pursuing the kinds of music that he enjoyed, which included starting a rock band with

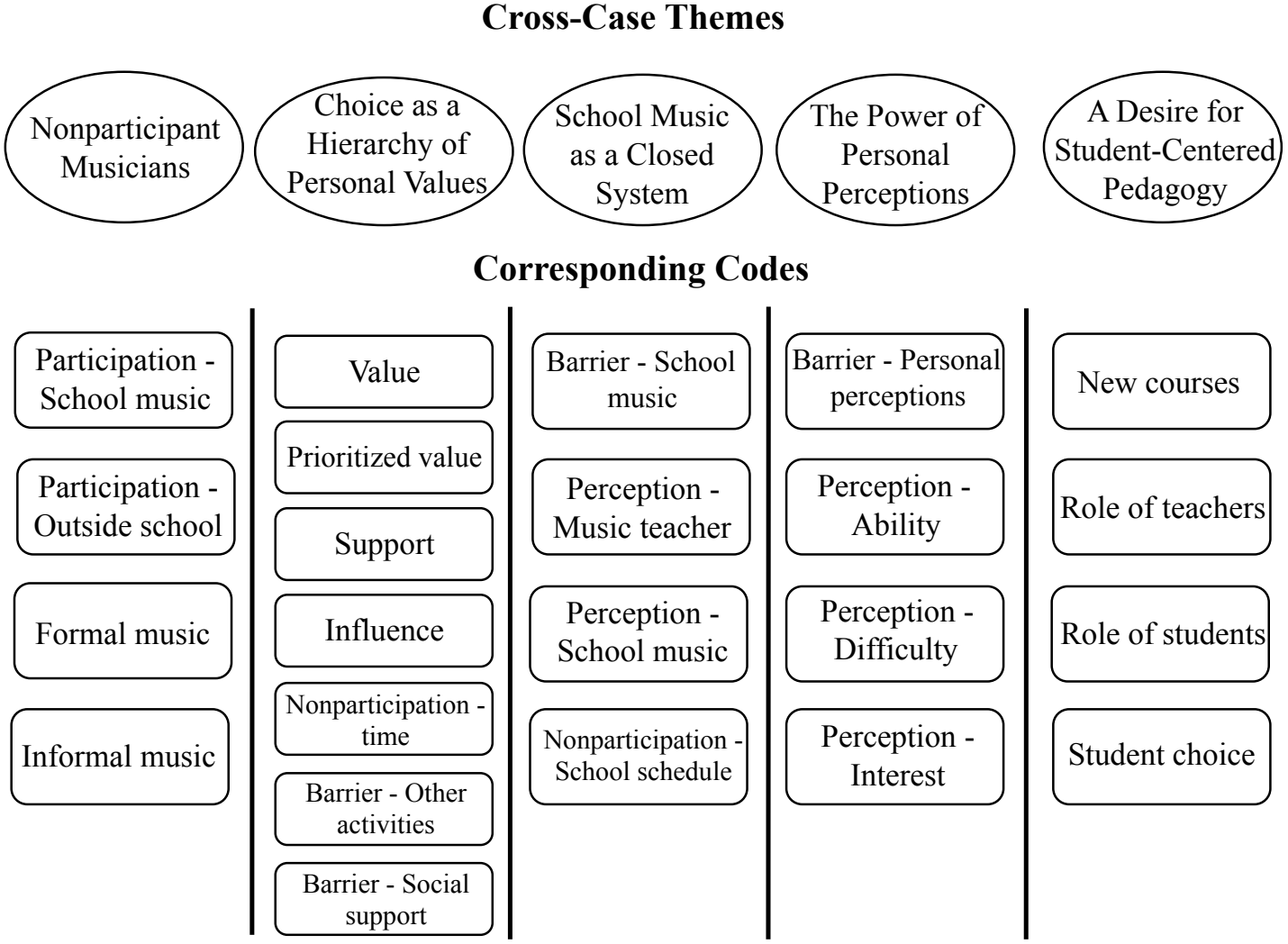

Figure 9. Cross-case coding framework

some of his friends. He was self-motivated to develop his skill to a high level on his own. Ignacio played trumpet, a traditional school band instrument, in a banda in which he worked as a musician, playing Mexican popular music. This contributed to his goal of a career as a professional musician. Carly used music primarily for therapeutic reasons, such as stress relief, mood regulation, and self-expression. It was interesting that the act of playing was as beneficial for her as the music itself. She particularly enjoyed learning popular music with her friend, Ted, and preferred music that was personally meaningful. Olivia shared that singing was a regular part of her everyday life and that that she felt an uncontrollable urge to sing. She described how her mother would discontinue phone conversations when they got in the vehicle together, because Olivia liked to turn up the radio and sing.

Four interview participants described previous or new musical activities in which they participated outside of school. Kahlil had formerly played drums in a drill team but had to discontinue this musical activity when he moved to Tremont at the beginning of the year because there were no such groups available. He also enjoyed creating music using computer technology, primarily creating beats and recording music, guided by his brother who was a music producer. Ibsaa had played electronic piano keyboard for his church in Ethiopia, but his responsibilities for paying his bills meant that his job prevented him from engaging in musical activities since he moved to the United States. Ibsaa was hoping he might be able to navigate this obstacle soon and reconnect with music through his new church in Tremont. Thanh was proud of his three-year membership in the marching band, even though he did not actually play an instrument. His description of the experience suggested that he enjoyed his participation, but that he

just did not have the opportunity to learn to play an instrument at school. In the period between the survey and the interview, Elena started to learn guitar on her own using resources available on the internet. She was motivated by a desire to join in making music with her father's extended family when they visited each other.

Four interview participants indicated that they were not currently involved in any musical activities outside of school. However, the survey responses for Ayeshia, Nicole, and Sophie indicated that they sang by themselves for fun a few hours each week. This discrepancy in responses suggested that they might have viewed this type of informal musical activity as a form of personal enjoyment, rather than a formal, organized musical activity. The only student who indicated he did not participate in any musical activities outside of school was Daniel; even he, however, conceded that he would consider enrolling in a music class at school if one similar to his middle school general music class were available.

I predicted that at least some of the students who elected not to enroll in school music participated in other school activities or jobs instead. This was, in fact, true for many of the interview participants, who described their responsibilities to academics, school activities, jobs, and family. What was fascinating was the fact that the activity conflicts that contributed to Trenton and Ignacio's school music nonparticipation were actually *musical.* Both of these young men described a deep passion for their musical pursuits, along with a level of commitment and dedication to these endeavors that was remarkable. I wondered whether any of the students currently in the school's music program would characterize their musical participation in such terms. This qualitative finding resulted in a change to the quantitative analysis. To this point in the study, I had

named the component containing items related to the constraints of involvement in other activities "non-musical activity constraints." As a result of this finding in the qualitative data, I changed the name of the component to "conflicting activity constraints."

The existence of these contrasting groups within school music nonparticipants, those actively engaged in active music making outside of school and those who were not, revealed an interesting and unexpected dimension in the qualitative data. The former group might be described as *nonparticipant musicians*, as their perceptions, values, and beliefs about music in general, more closely resembled those of the school music participants. The latter group, *nonparticipants*, consisted of those who were not actively involved in music making outside of school, which is not to suggest that they were nonmusical or did not use music. Some of the interview participants who claimed they were not involved in music outside of school mentioned listening to music or reported singing by themselves on the survey. This suggested that those who were not participating in active music making were likely engaged in the consumption or use of music as part of their daily lives. These cases also illustrated the differences between terms such as *nonparticipant, non-music student,* and *nonmusical*. While students may not elect to participate in music at school, this does not mean they are not musical, which marks a crucial distinction in framing the musical experiences and lives of school music nonparticipants.

Many of the people I encountered during this research study, upon learning about my topic, shared their opinions regarding the reasons they believed high school students did not participate in music at school. The vast majority suggested that students were simply not interested in singing or playing an instrument, so they did not participate in

music at school. The cases presented here suggest this is not the case; rather, most of these students were simply not interested in the musical experiences offered through their school music program or lost interest as a result of their involvement in musical experiences that did not sufficiently meet their expectations. These musical nonparticipants embodied many of the characteristics outlined by Williams (2012) in describing non-traditional music (NTM) students: school-age students, nonparticipants in school music ensembles, musical lives outside of school, and sang or played instruments. Some of the students did not read musical notation and at least one envisioned a career in the music industry.

The interview participants who desired a musical activity other than playing traditional band or orchestra instruments or singing in the choir sought musical fulfillment outside of school. The musical activities these students selected were personally meaningful and interesting, and allowed them to pursue the musical styles of their choice and to use music in a manner that met their individual needs. Gates (1991) identified six types of musical participants based on their musical motivations: recreationalists, dabblers, amateurs, hobbyists, apprentices, and professionals. Using these descriptions of musical participants, most of the interview participants would be recreationalists or dabblers who viewed music as a form of self-entertainment, which they pursued as long as they remained interested. Trenton would be an amateur or hobbyist, because he had an intense desire to expand his knowledge about music as a form of serious leisure. Igancio would be described as an apprentice, working as a musician in the hopes of becoming a professional.

Choice as a Hierarchy of Personal Values

Eccles and her colleagues (Eccles, 2005; Eccles et al., 1993; Wigfield et al., 1997) suggested that a rank ordering of personal values might be more useful in explaining choice behaviors than discrete, domain-specific values alone. The cases in the present study confirmed this finding, as most of the interview participants discussed their personal values and revealed the ways in which their prioritization for certain activities over others influenced their choices. Related to these hierarchies of activity personal values, a temporal element emerged in the data. The interview participants frequently referred to the presence of time restrictions and discussed how their priorities influenced their time management in scheduling and managing the various activities in which they participated. The prioritized values that emerged across cases included grades and school (particularly required courses and scheduling), musical participation outside of school, jobs, and sports. These activities received the highest priority in scheduling for interview participants, and also related to their decisions not to participate in music at school. Students also described the influence of parents and peers in relation to their own personal values and priorities. Many of the interview participants had a single-minded focus that drove their choice behaviors.

Single priorities. Participation in sports was a priority for Daniel and Carly at the time they decided to discontinue their musical involvement and prevented Olivia from joining a new activity after she moved to a new school. Carly said, "I guess I really didn't think music was that important, and I thought that sports would help me as a person or something" (Carly, personal communication, April 6, 2015). Olivia highlighted the issue of time management, comparing time demands of music to sports:

"If you think about it, I'm putting the same amount of time into sports as I would in music. I guess I love sports more than music, so that's why I chose that" (Olivia, personal communication, April 8, 2015).

Iganacio's priority was his outside of school banda, which was also his job. The scheduling conflict between his obligation to perform professionally on Saturdays and marching band was the reason he discontinued his participation in this school music activity. Ibsaa also spoke about how his job did not leave him with time outside of school for music. He said, "I work six or seven days. I'm not going to get a chance. I'll not even have the time to learn that [music]" (Ibsaa, personal communication, April 6, 2015). Ayeshia discontinued her participation in the school band because she struggled to maintain good grades in both band and the class she missed when she was pulled out for lessons. She expressed the belief that she would not have been able to balance school, music, and other activities if she were still in music. Ayeshia said, "I still don't even find it, how people that are, right now, involved with all that [music], how they actually manage to get all their work done, also practice, and do all that" (Ayeshia, personal communication, April 6, 2015). Sophie shared that she would rather engage in art classes at school than enroll in a music class, even if her ideal music class were available.

Groups of priorities. Other students shared a group of activities that were important to them, without indicating any prioritization. Kahlil shared several activities that were higher priorities for him than music:

> I did sports and other activities, and outside of school I'm busy helping my mom and sister out with stuff, so that brings less time for me to practice on instruments or something I have to do for music class. Sometimes I have other interests and

> stuff outside the school that I might want to do because the fact I can't do it in school. (Kahlil, personal communication, April 6, 2015).

Trenton also shared multiple values that were more important for him than joining music at school, including grades, a desire to enroll in future AP classes, and his job (so he could pay for his car). However, continuing his pursuit of the guitar on his own terms outside of school remained his highest musical priority.

Thanh was the only student who expressed a priority for music that was not entirely fulfilled. He had found an interesting way to participate in a school music ensemble despite the fact that he did not play an instrument. As he talked about his membership in the marching band, he seemed to suggest that his inability to play the trumpet he carried was a minor detail. However, the absence of this skill was an obstacle that prevented him from joining a band class. He said, "I just don't know how to play an instrument. I want to play, but then…If I know how to play it, I guess starting class would be very easy" (Thanh, personal communication, April 3, 2015).

Parental and familial values. Parental and familial values and support emerged as a major influence on the interview participants and their personal values and choices, confirming the results of previous research (Corenblum & Marshall, 1998; Davidson et al., 1995/1996, 1996, McPherson, 2009; O'Neill, 2005; Simpkins et al., 2012). For interview participants in the present study, the values of family and parents influenced personal values and priorities. For nine of the students, family influences were among the strongest factors in their decisions regarding music. Some families, such as those of Elena, Ignacio, Kahlil, and Trenton, actively supported the musical participation of their children, whether inside or outside of school. Ignacio's "entire family" (Ignacio,

personal communication, April 7, 2015) supported his musical activities, and his cousin gave him additional trumpet lessons as he was beginning to learn at school. Trenton's father did not play an instrument, but "showed me so much of the music I listen to and that's influenced me. It's definitely had an impact" (Trenton, personal communication, April 8, 2015). Other students, like Carly and Ayeshia, had parents who were more passive in their support of music. Carly described her parents as being relatively neutral concerning her participation in school music, neither encouraging or discouraging her. Ayeshia's mother supported her school musical participation, but only until her grades suffered. This, coupled with Ayeshia's identity as a good student, presented an example of parental priorities influencing those of their children.

Some students believed that their parents did not support their musical involvement. Olivia's and Daniel's parents did not have musical backgrounds and did not really encourage them to participate in music, suggesting that parents might find it easier to support those activities they value and with which they are familiar. Nicole's parents questioned her desire to join the school band, and she thought they could have been more supportive, particularly at the outset:

> I first told my parents, they were really excited. Then at the same time they were like, 'Are you sure you want to do this because you don't seem like the kind of person that would try to join something like this.'…Maybe they were right, because that actually happened with my sister, she joined orchestra, they told her 'You're not good for this, you're not going to like it.' They let her join and a month later she said, 'I don't want to do this any more. I want to quit.' (Nicole, personal communication, April 7, 2015)

Sophie joined band because her mother and other family members who participated in music making activities really wanted her to learn to play an instrument too. Sophie described how she felt as though they pushed her toward band, particularly when she wanted to discontinue, but they encouraged her to keep playing. She felt her mother "always wanted me to be in music and stuff because that's the way she was" (Sophie, personal communication, April 3, 2015). This illustrated a contradiction between her familial and personal values.

Ibsaa and Thanh provided the perspective of first generation immigrant students regarding family. Ibsaa's father, a Muslim, did not want him to participate in music at school because he "hated" it, while Ibsaa's mother was indifferent regarding his musical interest. Thanh's parents left the decision to participate in marching band up to him, provided he maintained good grades in his schoolwork. He attributed their seemingly passive support to their lack of school experience, as well as a lack of knowledge about the American school system their children attended. He said, "My parents…drop out of school in second or third grade in Vietnam. They don't really know much about school, and they don't really know about music program here. (Thanh, personal communication, April 3, 2015).

Peer influence. Peers also influenced the interview participants' values and priorities for school music, which in turn influenced decisions regarding participation. Olivia, Thanh, and Nicole said that their friends exerted more influence on them regarding school music than their families. For Olivia and Thanh, whose parents had no musical background, musical friends reinforced their interests. Olivia and Carly both had

musical friends with whom they made music outside of school. In talking about her friend, Ted, Carly said:

> He's encouraged me a lot, kind of, because he's very good at the piano and he's a good singer. Sometime, I would play and he would sing, or he would play and I would sing very quietly to myself, kind of, and he would try to get me to sing louder. (Carly, personal communication, April 6, 2015)

Nicole's friends, however, pressured her to discontinue band in middle school. She described their influence:

> I guess they got too cool for band, and they would just make fun of the band people. A lot of friends I made in band had just quit and thought it wasn't fun anymore, or wasn't cool. I decided it wasn't for me anymore. (Nicole, personal communication, April 7, 2015)

Ayeshia's friends joined choir with her and some of them also discontinued participation when she did. When Carly's friends stopped singing in choir, she felt "like I needed friends in there to feel comfortable in the class" (Carly, personal communication, April 6, 2015). These examples suggest that the peer group can provide both positive and negative influences on values for music and school music participation, particularly during the period of early adolescence.

Some students, such as Elena and Ibsaa, did not have friends who encouraged their musical involvement. Kahlil had just moved to Tremont at the beginning of the school year, and he believed his lack of an established social group made joining music difficult:

> Once I moved schools, it made it way more harder for me to attend music class, because I don't know nobody. If I had a friend in music class, I would feel comfortable around them, so I could actually try to do something. (Kahlil, personal communication, April 6, 2015)

Carly talked about a desire to join choir again, but conceded, "I don't really know personally a lot of the kids that are in choir, so I feel like it would be something that I would have to gain a lot of courage to do" (Carly, personal communication, April 6, 2015).

Eccles (2005) proposed that individuals make choices based on their evaluations of the options available to them. Trenton provided insight into how changes in peer group affiliation influenced his awareness of school music. He explained how his primary peer group and interests had changed to include people in the school band, as well as how this influenced his decision not to get involved in school music. Trenton said:

> In freshman year, I think it was just because I wasn't focused on it. I didn't think about it. At the time, I didn't have Justin and Ethan [band students] as friends. I had different friends. I was into skateboarding at the time, so I was into different things. I didn't think about it [school music] and see it enough. Then sophomore year, I did meet Justin and then he drew my attention to band and, at that point, I just…They didn't really ask me until I was about a junior…I wouldn't hang out with the band like I do now. (Trenton, personal communication, April 8, 2015)

Trenton's and Olivia's musical friends tried unsuccessfully to persuade them to join school music ensembles as high school students. This suggested that the peer support

and encouragement Trenton and Olivia received from their musical friends was not enough to overcome the other obstacles they perceived to participating in music at school. Given that these relationships developed midway through high school for both Trenton and Olivia, I wondered whether the presence of close, musical friends earlier in their school years might have encouraged them to participate in school music. I could not help but wonder if the timing of the development of these relationships occurred too late to alter their personal perceptions regarding school music barriers.

Teacher influence. Only three students mentioned the influence of teachers (other than music teachers) in both encouraging and discouraging their musical involvement. Trenton's guitar teacher, to whom he always referred as his "mentor," was the catalyst that sparked his passion for playing guitar. Nicole's fifth grade teacher motivated her to join band and to get involved in a new school activity that she likely would not have considered on her own. Unfortunately, Elena's school counselor discouraged her from rejoining band upon her return from Mexico, and the requirement that she receive the band teacher's permission presented an additional obstacle. Elena, who was very interested in resuming her instrumental study, eventually gave up when she repeatedly failed to connect with the music teacher at school. Four of the music teachers at Oak Valley traveled to other buildings to work with elementary and middle school students, so the itinerant nature of the music faculty helped to explain Elena's challenge in trying to find the music teacher at school. While there were few examples of the influence of individuals other than parents or peers discussed in the interviews, it was clear that experiences with others, such as school personnel, had a tremendous impact on the interview participants. The influence of the music teacher, which is inextricably

linked to the school music experience, is discussed in the next section, along with other school music structures.

Prioritized values motivated the choice behaviors for the majority of the interview participants. The students shared how their parents, friends, and teachers influenced their values for music and other activities, as well as their participation. Confirming results reported by several past authors (Corenblum & Marshall, 1998; Davidson et al., 1995/1996, 1996, McPherson, 2009; O'Neill, 2005; Simpkins et al., 2012), parental and familial values had the strongest influence on the students in the present study. Many of the students expressed a value for or interest in music, but their priorities dictated how they allocated their time, which confirmed the results reported by previous authors (Eccles, 2005; Eccles et al., 1993; Stewart, 2005; Wigfield et al., 1997). This finding suggested that students might be interested in music, but valued other activities more.

School Music As a Closed System

Swanwick (1999) argued that music education did not become "problematic until it surfaces in schools and colleges, until it becomes 'formal' and institutionalized" (p. 1). He suggested that music is easily accessible in the world outside of school, but because the outside musical world existed almost entirely apart from music in schools (in most cases), school music was a closed system. The responses of interview participants revealed a number of ways in which the established structures of school music actually functioned as barriers to students who wanted to participate but, for a variety of reasons, felt they could not.

The majority of interview participants had positive perceptions regarding school music, yet they shared several aspects of the program that they believed to obstruct their

participation. This included perceived barriers to engaging in school music, as well as personal experiences with barriers that resulted in decisions to discontinue the music program. The interview participants' descriptions of their personal experiences with, and perceptions of, school music, revealed several barriers they believed to obstruct their participation in school music. A few interview participants recounted their impressions of friends' experiences in the program as music students. The interview participants used words and phrases like "awesome" (Olivia), "very cool" (Carly), "fun" (Daniel, Ignacio), and "I like it" (Kahlil) to describe the school music program. Ibsaa was "jealous" that students had an opportunity to participate in music at school, though he did not. Elena thought that those involved in school music took it "very seriously," while Ayeshia thought music needed to be taken as "seriously" as other classes. Nicole described school music this way: "It's just a place to meet new people, make new friends, and just feel like you're part of something, like you belong somewhere. It's a pretty good program to have in school" (Nicole, personal communication, April 7, 2015). Thanh also thought school music was "pretty good, because it's offered the student a choice to learn an instrument they want" (Thanh, personal communication, April 3, 2015). Trenton, however, described school music in the Tremont School District as "lackluster," without major problems, but in need of some improvements. Sophie had a negative opinion of school music as "old-fashioned" and lacking opportunities for students to exercise choice.

School music barriers. Students cited specific examples of school music barriers that fell into four categories: program structure, courses, instruction, and content. Nearly half of the interview participants believed that school music required time of students outside of the school day, likely due to the daily, early morning rehearsals of the Oak

Valley jazz and marching bands and the after school rehearsals for the musical. Elena, Thanh, Olivia, and Ibsaa believed that the structure of the program made it "too late" for them to join music in high school, resulting in missed opportunities for participation. When Thanh's friends told him that most students started instruments in elementary school, their comments shaped Thanh's perceptions, "I think it's too late…so I don't think you can join. All the kids in there joined, I'm probably not to catch up to them, it will be hindering" (Thanh, personal communication, April 3, 2015). The limited number of opportunities for guitarists was an obstacle for Trenton, and for Ayeshia, the pull-out structure of the lesson program became a barrier as her grades suffered. The required weekend events for marching band and a lack of flexibility in working around that schedule presented barriers for Ignacio.

The types of classes and instructional methods were barriers for other interview participants. Daniel wanted a general music class similar to his middle school experience, an exploratory course instead of the "specialized" classes and ensembles currently offered. Sophie and Elena described requirements they needed to meet in order to start an instrument or join the full band class as beginners. Carly and Elena both felt they learned better in individual settings than in large groups, such as those found in ensemble classes. Trenton, as a primarily self-guided learner, was critical of the teacher-directed model of instruction, in which the music teacher made all of the decisions.

The content of school music classes presented another barrier for interview participants, particularly regarding the repertoire studied and performed by school music ensembles. Ayeshia found the variety of choir music interesting at first, but she later encountered several pieces she did not enjoy singing. Ignacio described the efforts of his

middle school band director in choosing pieces he enjoyed but also including familiar or popular music the students would enjoy. Ignacio pointed not only to the director's musical choices, which he termed as "old," but to the amount of repetition involved in rehearsal:

> …if he [the director] gives us way too many old sheets of music, it might get kind of boring for us because we're just going to be repeating and repeating the same songs and over and just going to get kind of annoying. (Ignacio, personal communication, April 7, 2015)

Carly found some of the pieces she sang in choir or played on piano to be difficult and felt that she could not perform them well. Two students talked about teacher-initiated movements from clarinet to bass clarinet in middle school, with different results. Ayeshia felt it was a compliment when her director asked her to switch instruments, but Nicole felt as though her director imposed an instrument upon her that she did not want to play.

Perceptions of music teachers. The students' perceptions of their music teachers also presented barriers to their participation. Nicole described her experiences with two different music teachers that highlighted the differences between them. One teacher "was just really harsh with the students" (Nicole, personal communication, April 7, 2015) and she connected this teacher to her low self-perceptions of musical ability that started during her first year of band. This improved the next year when her music teacher "was always really encouraging…Even though he wanted me to try harder things, he always really understood if I couldn't" (Nicole, personal communication, April 7, 2015). Carly recounted her middle school choir experience with a teacher who seemed to have

classroom management issues. "She eventually kind of, was gone for a few weeks because the students were so rude to her, and she kind of gave up on trying, I would say…she stopped trying to get everybody involved in it" (Carly, personal communication, April 6, 2015). Ms. Patterson and Mr. Franklin both confirmed in separate conversations that the poor quality of the middle school choral experience presented challenges in recruiting students to the high school choirs. Trenton sharply criticized what he perceived to be the approach of the band directors, painting an unflattering picture:

> I think the teachers sometimes can take it too seriously, in my opinion. I mean, it is their job and they do have quotas and schedules to keep up with and obviously, they're getting paid to do it and it's probably their passion. It's just the way they present the music, the way they go at it that is more of a professional 'don't get personal with the students' kind of way, I've noticed, and they just seemed boring to me. (Trenton, personal communication, April 8, 2015)

I observed Mr. Hoffman and Mr. Richards interacting with students in an informal, though still appropriate, manner, both inside and outside of rehearsal. They both had a structured, goal-oriented, and pragmatic approach to their teaching, so perhaps Trenton viewed their approach to be more professional than personal. Sophie felt that her music teachers did not believe in her musical ability and made her feel unwelcome in music class. She believed that they did not support her musical participation, take her involvement seriously, or try to help her to improve her musical skills.

Related barriers. Other barriers to participation in school music included associated costs, transportation, and class requirements and scheduling. Ignacio

described how the cost of a uniform was a financial burden for his family, but described how the band directors provided one for him to wear at no cost. He sais, "At one point when the teacher told us about the uniform, we had to pay some money for it. At that time, my mom was having troubles at her job. She couldn't pay for it" (Ignacio, personal communication, April 7, 2015). This experience has caused him to put a portion of his pay from every banda gig into a savings account so that if he returned to band, he would be able to pay for these things himself. Cost was also a factor for Olivia and Nicole, who indicated that tight budgets made allocating money for musical activities difficult. Ibsaa, who was new to school in America, viewed school as a place where you learned everything for free. As a result, he would have liked to participate in music, but felt he couldn't because of the time commitment outside of school revealed by his friend. Ayeshia shared her problems finding transportation to concerts, and Elena empathized with her friend whose after-school musical obligations meant she often had to wait until 7 pm for a city bus. However, Daniel, Sophie, and Trenton all indicated that their family financial situation was comfortable to a point that their parents could support the monetary costs of the activities in which they desired to participate.

School schedules. The majority of students referenced "full" class schedules that did not allow them an opportunity to enroll in a music class at school. Students spoke of their obligations to required coursework and scheduling conflicts between classes they needed and music courses. I examined the Tremont high school course registration booklet and discovered that students were required to take 44 credits in order to graduate. The maximum number of courses a student could take each year was 16, with eight courses each semester for one credit each. To meet the requirements, students

would need to take 11 credits each year, and, after accounting for one required physical education class each semester, students had three elective credits to fill each year. This would leave plenty of room for music, suggesting that the scheduling conflict situation was not as dire as portrayed by the interview participants. However, during my time at Oak Valley, I observed large study halls during every period throughout the school day (field notes, February 25, 2015) and wondered whether students might be choosing a study hall to do homework, as Kahlil reported. If the priority for study hall was stronger than the desire for a music course, this might result in students framing their choices not to participate in music as schedule conflicts. Perhaps, as Frakes (1984) reported, scheduling issues became a greater barrier for students who had less positive attitudes toward school music.

Despite their overall positive perceptions of the school band program, interview participants identified a number of barriers that obstructed their participation in the school music program. These structural barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993) included rehearsals held outside of the school day, the types of classes and modes of instruction, and the course content (primarily repertoire selection). Students identified additional barriers related to school music, including financial costs, transportation issues, and the school class schedule, which might have actually been more closely related to personal values. Finally, negative perceptions regarding the music teachers also presented obstacles to school music participation.

Whether these individual perceptions reflected reality, Eccles (2005) reported that student perceptions become the reality upon which they base their decisions related to

choice behaviors. This appeared to be true for the interview participants who based their decisions solely on how they thought school music operated, their impressions of their participant friends' experiences, their own direct experiences with the program, or some combination of these. My observations of the music classes confirmed many of the interview participants' evaluations: repertoire selected by teachers was primarily from traditional Western art musical styles, teacher-directed instruction was the norm, rehearsals outside of the school day were common, and there were no opportunities for beginning musicians at the high school level. The single, non-performance music course, history of popular music, combined student- and teacher-led instruction, student choice in class projects, and required no previous musical experience. The small enrollment of the class and the fact that none of the students mentioned it in their interviews suggested limited awareness of a music class with many of the attributes that students desired in their ideas for new courses. This finding also highlighted the need for music educators to promote what they offer, especially to students beyond those already enrolled in music classes.

The Power of Personal Perceptions

Eccles (2005) wrote that the theory of choice behaviors represented in her model was built on the assumption that individual perceptions were the "interpretation[s] of reality" (p. 81) that motivated behavior. This seemed to be true for the interview participants in this study, as they shared their experiences with music inside and outside of school, their self-evaluations of their musical abilities and interests, and their perceptions of personal barriers and musical difficulties. These self-perceptions influenced individual decisions regarding their level of musical participation in various

contexts. Former school music participants described how their previous experiences shaped their musical self-perceptions. Students most frequently spoke about their musical abilities and perceptions of musical task difficulty, along with other personal barriers to school music participation.

Perceptions regarding competence in music varied widely among the interview participants, and approximately half of them described music as difficult in some manner. In speaking about these beliefs, students framed musical ability in one of two ways, the first being a personal evaluation of musical ability. Kahlil said, "I'm not the talent. I'm not great, but I know I have a little bit of skills in music" (Kahlil, personal communication, April 6, 2015), even though he did not think he was a good singer. Thanh thought that he was "not really creative, but I think I'm decent…I think I could play okay" (Thanh, personal communication, April 3, 2015). The only interviewed students who described themselves as having strong musical abilities were Olivia, Ignacio, and Trenton.

The other way that students framed their perceptions of musical ability was to compare their own abilities to the perceived abilities of others, often suggesting feelings of inferiority. Ayeshia, Carly, Elena, Nicole, and Sophie spoke about how their lack of confidence in their musical competence led to feelings of inferiority in comparison to the other students in their musical ensembles. After Sophie started school in Tremont, she said, "I looked at all of the band members who were in the percussion section and I was like, 'They're way better than I am. They're more experienced'" (Sophie, personal communication, April 3, 2015). Carly compared herself to the other members of the choir:

> There was a lot of better singers in the class, and just being in the class with them, I thought, 'Well, they're a lot better than me. Maybe I should step down a notch and let them shine,' or something. (Carly, personal communication, April 6, 2015).

When these feelings of low ability combined with perceptions of a high level of musical difficulty, Ayeshia, Carly, and Nicole described feelings of frustration. Csikszentmihalyi (1990) considered the balance of these two dimensions, challenge and skill, essential for the enjoyment of optimal experience, or *flow*, in any activity. When an imbalance of high challenge and low skill occurred, he described the result as feelings of anxiety. Ayeshia and Carly were frustrated by the music they sang in choir, which they perceived to be difficult, either as a result of the language of the text or the pitch range of their part. Nicole felt that learning the clarinet was difficult in the early stages of learning and that it only became more so as she progressed to new skills. In the middle of seventh grade, she said, "It got a little bit harder, because most of our songs were just, like, high notes. I know them, but I wasn't good at them" (Nicole, personal communication, April 7, 2015). By the time Nicole reached eighth grade, she felt pressure to play well to earn a good grade in the class, and it seemed she was tired of the struggle. She said, "It was something I had to be good, and something I had to keep trying in, and that was a good thing, because it was pushing me to do better, but it wasn't fun any more because all the fun was taken out of it" (Nicole, personal communication, April 7, 2015). Nicole did confess that she probably did not practice as much as she should have and that likely contributed to her frustration.

Ignacio and Trenton were the only students who described musical difficulty as a constraint. Igancio described how he was overwhelmed in the early stages of learning the trumpet: "It was kind of difficult for me to learn at first: how to read notes, how to finger, how to hold the trumpet right" (Ignacio, personal communication, April 7, 2015). He also described the difficulty of learning to march and play as a beginning marching band member. Trenton described his first experiences in learning guitar: "It might have sounded like crap, but they gave me a sheet of chords and they had pictures of it. I just sat there trying to learn my chords" (Trenton, personal communication, April 8, 2015). It was interesting to note that these two students were the only ones still playing the instruments they started, one in an ensemble and one in his basement.

Other personal barriers. Various other personal barriers emerged, such as fear of performing and loss of interest in school music. Carly expressed her fear of singing in front of others and Nicole described how group performance did not ease her performance anxiety. She said, "Performing was my biggest fear. I never liked getting out and performing in front of anybody. Even though it was a big group, I felt that if I messed up, everyone was going to know it was me" (Nicole, personal communication, April 7, 2015). Ayeshia, Elena, Nicole, and Sophie all expressed a loss of interest in school music. Daniel specifically mentioned a lack of interest in the classes currently offered and Trenton was not interested in the instruments he could learn at school. Ibsaa worried that his time away from music may have diminished his interest: "I'm really loving music, but sometimes I feel like I lost my music interest because I have been a long time without music" (Ibsaa, personal communication, April 6, 2015).

The personal perceptions of the interview participants were contributing factors to their decisions regarding participation in music, especially school music, presenting intrapersonal barriers (Crawford et al., 1991; Crawford & Godbey, 1987; Jackson, 2005; Jackson et al., 1993). These students connected personal evaluations of musical competence and perceived difficulty to their decisions regarding musical participations, confirming findings by Eccles and her colleagues (Eccles, 2005; Eccles et al., 1993; Wigfield et al., 1997). For some students, the experience of participating in a school music ensemble shaped their beliefs in their musical abilities, while, for others, this participation resulted in a loss of interest in an activity once considered desirable. Those students with strong beliefs in their musical competence participated in music regularly outside of school, and those whose self-perceptions were more moderate did so occasionally. Another personal barrier that emerged was a fear of performing, a result that suggested the ensemble performance-based model of music education did not appear to meet the needs of all students (Kratus, 2007; D. A. Williams, 2007, 2011; D. B. Williams, 2007, 2012).

A Desire for Student-Centered Pedagogy

The interview participants shared a number of ideas for potential school music courses, which varied widely based on their own personal musical interests. Despite differences in the details between the content and structure of these courses, the suggestions all indicated a desire for music courses reflecting student-centered content and instructional practices. O'Neill and McMahon (2005) defined *student-centered learning* in terms of three principles: student choice in their education, active versus passive learning, and a shift in power between the teacher and the student. The authors

viewed each of these principals on a continuum, with choice and power on a continuum between the teacher and students, and learning on a continuum from passive to active models. Essentially, student-centered pedagogy addresses issues related to who we teach, what we teach, and how we teach. Student-centered pedagogy moves beyond the traditional, teacher-directed practices that dominate music education, toward guiding or facilitating student learning (Allsup, 2003; Green, 2002, 2008; Scott, 2011; Shively, 2002).

New music courses. The ideas for new music courses suggested by the interview participants reflected the kinds of courses they would be interested in taking (Table 16). Several interview participants suggested music classes focused on popular musical styles or instruments such as guitar, piano, bass, or drums. Ibsaa desired a class piano course in which he could learn piano in a group setting. He also suggested guitar lessons offered on an individual basis, because he believed the instrument was harder to learn than piano, while Trenton thought a small group guitar class would be a good option. Popular music ensembles were suggested by Daniel (rock band class), Ignacio (starting a band), and Kahlil (a band that played non-traditional music and created their own in a group.) Nicole thought bands and orchestras might play more "modern music" (Nicole, personal communication, April 7, 2015), referring to popular musical styles.

The interview participants also suggested courses that existed at the elementary or middle school levels might be offered for high school students. These included courses modeled on elementary music, including singing and playing instruments, and the Tremont middle school general music course, which included learning popular instruments and music technology. Other students suggested basic musical concepts

Table 16

Ideas for New High School Music Courses Provided by Interview Participants

New music course	Interview participants
Popular music instruments and styles	
Piano, bass, guitar, drums	Ayeshia, Daniel, Elena, Ibsaa, Trenton
Rock band, Non-traditional band	Daniel, Kahlil
Music group project	Ignacio
Popular music band and orchestra	Nicole
General music courses	
Tremont middle school general music model	Daniel
Elementary general music model	Kahlil
Basic musical concepts	Kahlil, Thanh
Instrument courses	
Beginning instrument or choir	Kahlil, Thanh
New, non-specific musical instruments	Carly, Elena, Trenton
Drill team	Kahlil
Vocal courses	
Karaoke	Carly
Musical theatre, madrigal	Olivia
A capella, men's choir	Sophie
Music appreciation	
Popular music appreciation	Sophie
World music	Kahlil
Creative music courses	
Collaborative composition (as an ensemble)	Ignacio
Music technology (creating beats)	Kahlil
Required music course	
Music performance	Ayeshia
Survey course	Kahlil

course, covering topics such as rhythm and reading music. Thanh thought that classes for students who wanted to learn an instrument or to sing could be offered at the middle and high school levels, allowing individuals to start musical study at any point during their school career. Other interview participants also suggested that high school instrumental courses focused on a wider array of instruments than what was currently available (e.g., guitar, drums, bass, piano) would be beneficial. Kahlil wanted these types of courses to include instruments like "violin, trombone, and harp" (Thanh, personal communication, April 6, 2015), as well as popular instruments, to provide an opportunity to learn to play at a basic, not specialized, level.

Other recommended music courses included non-traditional options for singers and music appreciation courses. Carly suggested a karaoke-type course focused on singing popular music, while Olivia thought that a musical theatre or madrigal music course would be interesting. Sophie suggested offering a capella or men's choirs as an expansion to the existing choral program and a music appreciation course similar to the existing history of popular music class. Kahlil was interested in a world music appreciation course to learn about music from other countries. These ideas supported Frakes' (1984) finding that nonparticipants desired music courses that did not have a performance component.

The interview participants also suggested a variety of other miscellaneous music courses. Kahlil suggested that a drill team would provide students who were not already participating in band or dance team an opportunity to be involved in music either inside or outside of school. Both he and Ayeshia suggested that a required music course might be offered at the middle and high school levels so all students would have an opportunity

to study music. Kahlil suggested this take the form of a survey course, in which students could experience the different types of music classes available, allowing them to make informed choices concerning specific, focused courses of interest for future enrollment. Ignacio and Kahlil desired creative music courses, focused on composition or creating songs using computer technology.

While the students suggested a broad array of courses, the common element among the proposed courses was the clear representation of personal musical activity preferences. In many cases, the ideas for new classes mirrored the choices the interviewed students would have liked to pursue in school but could not, because they did not exist. It was not surprising that many students suggested opportunities to study popular music instruments and styles, as suggested by Green (2002, 2008) and Clements (2010). An unexpected finding was that some students wanted opportunities at the high school level that currently existed only at the elementary or middle school levels, such as general music or beginning instrumental classes. These ideas suggested that school music programs might expand beyond the traditional ensemble courses, as well as offer additional pathways into the study of music for students at any level.

Student choice. The ability to exercise choice in music courses was a prominent aspect of the ideas stated by the interview participants. Trenton articulated a perceived lack of choice as being one of the issues that made him resistant to joining band:

> The teacher makes a lot of decisions. I actually think that's, like, a natural factor that's going to come into band because, like I said, it's 1[teacher] on 50 [students]. I still feel like that's just a problem for me, it leaves a bad taste in my

> mouth sort of thing. I'm not 100% sure if there is no student input, but I'm pretty sure there's not a lot. (Trenton, personal communication, April 8, 2015).

Interview participants suggested that student choice might be used to determine course offerings or the content studied. Elena and Trenton believed student choice should determine new instrumental course offerings. Elena said, "I think it would be better if they would ask students what instruments they wanted to play and then go off that" (Elena, personal communication, April 7, 2015). Kahlil acknowledged that his desire to learn about music in other parts of the world might not be one embraced by everyone and suggested that students have choices regarding the content they learn in class. He said:

> Give us choices of what we should do. I know everybody in class don't like a certain thing or certain lessons we learned….I know some people like singing. It's a choice if you want to learn about singing and practicing it, or watch a movie and learn about the past music or learn how to do this type of instrument. (Kahlil, personal communication, April 6, 2015)

Kahlil went on to compare these kinds of choices to those decisions made by students about their musical involvement outside of school. Sophie suggested that students in a music appreciation class might pursue musical artists and styles that were personally meaningful. She said, "Let's say that a person has a favorite artist that they like. Let's just say it's Queen, for example. Maybe learn a little bit about the history around Queen, how they started what was their first music, how they eventually became famous" (Sophie, personal communication, April 3, 2015).

One specific area of student choice that emerged from the interviews regarded the repertoire studied in school music ensembles. For Thanh, this was a difference between

music inside and outside of school: "In school, most of the time, the music you learn is decided by the teacher" (Thanh, personal communication, April 3, 2015). Such teacher-centered repertoire decisions made some students feel coerced, as Nicole explained, "sometimes the student feels forced to play something that they don't really like" (Nicole, personal communication, April 7, 2015). Ayeshia also associated the word *force* with a lack of choice in repertoire decisions in her choir experience.

Students suggested that having a voice in repertoire decisions might sustain student engagement. Kahlil said, " Like, everybody don't like the same music, so each two weeks we do a different type music so people would be interested" (Kahlil, personal communication, April 6, 2015). Ayeshia thought that teachers might "make more of the students involved to all decide on a piece that they could all work with" (Ayeshia, personal communication, April 6, 2015). Daniel appreciated the opportunity he and his band mates had in selecting the music for their final middle school *Rock Band* project.

Because the type of repertoire studied in school music is currently an issue of debate in music education (Allsup, 2010; Green, 2002, 2008; Hebert, 2009; Kratus, 2007; Snead, 2010), I specifically included a question regarding repertoire at the end of the interview. I asked each interview participant whether the music studied in school should include pieces that were less familiar to students, pieces students liked, or a combination of both. Only two of the respondents shared the belief that school music should focus solely on the popular music students their age preferred. Daniel thought popular music would attract more students: "If people aren't in music already, I don't think they would join if they don't know it….But if it's listening to Bruno Mars or something, 'Oh, that sounds kind of interesting….I kind of want to try that out'" (Daniel, personal

communication, April 8, 2015). Ignacio's response indicated that he might not personally agree with a focus on popular music: "Since this generation's kind of a little out of this world, I think kids my age would rather play the music that's going on right now. The newer kind of stuff, Michael Jackson, Katy Perry" (Igancio, personal communication, April 6, 2015).

Most of the interview participants believed school music should be a combination of both familiar and unfamiliar music. For Sophie, this combination should be weighted toward popular music "because not all students like classical music" (Sophie, personal communication, April 3, 2015). Elena thought the music should be evenly divided, "50/50. Songs you like and songs that the instructor thinks you should know…what's best for you" (Elena, personal communication, April 7, 2015). While Kahlil thought a combination would be best, he suggested offering two different classes based on students' musical preferences. He said, "I know some students don't like to learn about new music. I got a few friends that don't…Then there are the people like me who want to learn about music I don't know about" (Kahlil, personal communication, April 6, 2015).

Other students simply suggested a combination of music might accomplish the goals of the teacher while concurrently meeting the needs of the students. Olivia thought a combination would help students "learn something new, but then they also have fun with the stuff that they already know" (Olivia, personal communication, April 8, 2015). Nicole also thought that a combination would be more enjoyable for students: "You'd get through the songs you didn't choose knowing that at the end you'd still have a song that you actually like" (Nicole, personal communication, April 7, 2015). Ayeshia suggested that beginning with music that students recognized might provide an entry point for

introducing less familiar music. Carly explained that the music should not be too old, "from B. C. or After Christ or something" (Carly, personal communication, April 6, 2015), but recognized that lyrics about "sex and drugs and alcohol and everything" (Carly, personal communication, April 6, 2015) in popular music might not be appropriate for school. Thanh agreed that the music selected for study needed to be school-appropriate.

Role of music teachers and students. Interview participants described learning environments in which students engaged in peer or self-directed learning, facilitated by a teacher who served as a resource as students worked to build their understanding of musical concepts and skills. Ayeshia envisioned the music classroom as one of active collaboration, where the students and teacher worked together to critique and improve musical performances, saying:

> [Students] give their opinions with the music, or with what doesn't sound right, or with what sounds super awesome, and make people know that they're doing a good job…In a music class, especially with choir, to hear everyone's opinion, to have everyone actually be talking, be able to express what they like of the music...To be able to just all work together, just not with the teacher instructing and the students having to obey whatever they say. (Ayeshia, personal communication, April 6, 2015).

Ayeshia's comment suggested that the music teacher might serve in the capacity of a "guide on the side" rather than a "sage on the stage" (Brown, 2008, p. 34), a sentiment echoed by other students. Elena suggested that students might work at their own pace in the classroom as the teacher provided individualized attention for each

student. Daniel enjoyed the support of the teacher as he learned primarily on his own in the middle school general music class. He suggested that teachers might work in the same manner when he said, "She was there to kind of help you out if you had real trouble with this or that, but for the most part you almost taught yourself" (Daniel, personal communication, April 8, 2015).

Daniel was not the only one who valued learning on his own. Elena was just beginning to learn guitar on her own, which was her preferred method of study, and Trenton valued the autonomy that his self-guided approach afforded. Other interview participants wanted opportunities to learn from peers. Carly suggested that students might learn from the teacher, but that "there would probably be other people in there willing to teach you…the students that know how to play…can be like, 'Hey, you want to come learn this one?' (Carly, personal communication, April 6, 2015). Ayeshia even suggested that the teacher could model a skill or concept and that the students would "be able to learn from each other and then the teacher just making sure that you're doing everything right" (Ayeshia, personal communication, April 6, 2015). The ability to learn from other students was an aspect of the marching band program that Ignacio particularly enjoyed: "I always had a helper there, the leaders of the trumpet section. I always asked them and they would always help me" (Ignacio, personal communication, April 7, 2015).

The interview participants suggested a number of ideas for revising the school music program to attract more students to enroll that reflected student-centered pedagogical practices (Allsup, 2003; Clements, 2010; Green, 2002, 2008; O'Neill & McMahon, 2005; Scott, 2011; Shively, 2002). The new courses proposed by students included popular musical styles and instruments, general music, beginning instrumental

music, a capella choir, and music appreciation courses. Student choice was a prominent feature of the kinds of learning environments these students desired. This included giving students opportunities to choose the types of courses offered, their class activities, and the repertoire studied and performed. Students advocated for expanding the roles of the teacher and students, creating a collaborative, active learning environment. In this style of music learning, the students suggested that teachers might serve in the role of facilitator in guiding student learning. These students also desired opportunities for self-guided and peer learning.

Chapter Summary

The individual perceptions and experiences of each interview participant regarding music inside and outside of school revealed a number of factors that contributed to their decisions regarding participation in the school music program. The individual cases revealed some of the reasons that students did not enroll or decided to discontinue their participation in the school music program, as well a number of perceived barriers obstructing their participation. These students also suggested a number of ideas for revising school music courses that might engage a greater proportion of the student population. Observations of the music classes at Oak Valley High School afforded an opportunity for me to compare the perceptions of school music nonparticipants to music program and courses that existed during the period of the study. As an additional source of data for triangulation, I referred back to the individual students' survey responses, collected seven weeks earlier. The data collected in the survey, and especially the responses to the open-ended items, confirmed the data collected in the interviews. The interviews provided an opportunity to collect much more

detailed data regarding students' experiences with school music, particularly in regard to the factors that informed their decisions not to participate in school music. I also examined the course requirements from the school district course handbook and information regarding student schedules provided by Sandra, the school administrative assistant in analyzing the data related to academic scheduling.

Each of these cases, bounded by individual experiences, revealed a number of within-case themes. However, many of the within-case themes related to constructions of personal identity; values for music, academics, and activities; and sources of support. In relating personal experiences with school music, a variety of constraints and barriers emerged in the across-case themes that contributed to the students' decisions not to participate in school music. The interviews allowed me an opportunity to learn about each student's experiences with these barriers and the ways in which these barriers operated to obstruct their participation in school music. Both the within-case and cross-case themes are summarized in Table 17.

An examination of the themes across cases revealed five shared themes: nonparticipant musicians, choice as a hierarchy of personal values, school music as a closed system, the power of personal perceptions, and a desire for student-centered pedagogy. An unexpected finding of this phase of the study was the depth and richness of the musical lives of these students outside of school, suggesting that nonparticipation in school music was not necessarily an indicator that a student is not musical. Rather, such students often find musical fulfillment outside of school that is more personally meaningful than school musical experiences. The interview participants' choices in school activities and courses suggested a hierarchical order of values that also dictated

Table 17

Within- and Cross-Case Themes for Oak Valley School Music Nonparticipants

Within-case themes			
Name	Theme 1	Theme 2	Theme 3
Daniel	Athletic self-identity	No time for school music	Music as recreation
Sophie	Self-fulfilling prophecy	Musical autonomy	Music appreciation
Ayeshia	"Good student" identity	Student choice	Music for all students
Elena	Disappointment	School music is serious	Playing on her own terms
Nicole	Negative band experiences	Expectations versus reality	Frustration
Ignacio	Aspiring professional musician	Paradox	Inspiration and support
Carly	Regret	Musician	Music as therapy
Kahlil	High school graduation goal	Musical interests, not priorities	Musical eclecticism
Trenton	Self-taught guitarist	Philosophical differences	Formal versus informal music learning
Olivia	School music not an option	Singer self-identity	Family values
Ibsaa	Immigrant school experiences	Parental respect	Prioritized obstacles
Thanh	Marching band member	Missed opportunity	Acceptance
Cross-case Themes			
Nonparticipant musicians		Choice as a hierarchy of personal values	
School music as a closed system		The power of personal perceptions	
A desire for student-centered pedagogy			

the allocation of time and resources toward those activities most valued by students. The influence of parents and family in shaping these values and in supporting participation proved to be the strongest, followed by the influence of peers.

Barriers related to the structure of school music programs and personal self-perception emerged as having the most influence on students' decisions to participate in school music. Interview participants cited the courses, content, and procedures of music classes; their perceptions of music teachers; and issues related to cost and transportation as barriers they perceived to their participation. Despite the number of students who stated that course requirements and the school schedule prevented them from registering for music classes, my consideration of these scheduling issues revealed that the situation was not as restrictive as student comments suggested. Therefore, it is likely that other values, perhaps a desire for scheduling a study hall, might have been unspoken. Personal barriers related to low self-perceptions of music ability and high evaluations of musical difficulty resulted in feelings of inferiority in comparison to other music students and frustration related to performance, both of which were deterrents to participation.

In suggesting revisions for the school music program that might engage more students in music at school, student-centered pedagogical practices emerged from the interview participants' responses as a strong recommendation. Interview participants desired new music classes focused on their interests, including popular music; opportunities to begin instruments at the secondary level; and general and music appreciation courses. The students interviewed wanted choices regarding the activities and repertoire studied in these courses and suggested that a combination of teacher- and student-selected pieces would satisfy the goals of both students and teachers. Students

described active, collaborative learning environments in which students would learn on their own and from each other, guided by the teacher.

Coda

There was one concurrent, qualitative component on the survey intended to collect data from both school music participants and nonparticipants regarding ideas for possible revisions to the current school music program that might encourage more students to participate. The purpose of this component was to gather more data than would have been possible through the interviews alone, since all students who completed the survey ($N = 319$) responded to these open-ended items. I analyzed the responses using the same procedures previously outlined for the interview data.

Ideas for Revising School Music

In an open-ended survey item, I asked respondents to suggest music courses their school might add in which students would be interested. Of the total respondents, 19.7% either indicated they had no ideas to contribute or did not know what courses they would suggest. A few current music participants believed Oak Valley High School already offered a good variety and a sufficient number of music classes, while some of the nonparticipants stated that they were not interested in, or were unable to take, new music courses, if offered. Many of the responses included multiple suggestions for new music classes that survey respondents believed would be attractive to students at their school. These ideas fell into three major categories: extensions of existing music ensembles, new courses influenced by popular music, and music technology. A smaller number of respondents recommended cultural, creative, and analytical music courses.

Extensions of existing ensembles. Several students, most of whom were music participants, suggested new music courses that extended the musical ensemble opportunities currently offered at their school. The majority of these were suggestions for vocal music courses, with the most popular being show choir. Some of the ideas for new vocal music classes included traditional choral ensembles not offered as part of the curriculum, such as jazz choir and men's choir. Some students suggested a fusion of traditional ensemble opportunities with contemporary musical culture, including a capella, pop, and rock music choirs. Students also suggested courses focused on learning to sing, both in group classes and individual lessons, but only a few students specified that these might use popular vocal styles. One student provided this specific example:

> I think that if they did have a singing class that could do something more of the kind of music that listen to. Like, for example, I've tried to teach myself how to scream for a long time and I could never do it. If there was a teacher who could teach me how to scream and become better to the point where I don't hurt my throat, that would be great. (survey response, February 21, 2015)

Survey respondents also suggested a wide variety of extensions to the existing instrumental ensembles offered at Oak Valley. The most popular of these were courses focused on learning instruments. While most students did not specify the kinds of instruments these courses would include, three very different ideas emerged: a course for beginners, a course focused on learning the basics of several instruments, and courses focused on specific instruments. One music participant suggested that these kinds of opportunities might allow for the pursuit of a secondary instrument. Other respondents desired courses that combined band and orchestra or band, orchestra, and choir. One

student added a popular music element to this type of ensemble, writing, "I think a hip/hop modern orchestra would be cool. It would be fun to combine the band and orchestra programs during a class (for those who are interested) and have an ensemble that plays modern music, maybe song covers" (survey response, February 21, 2015). Music participants suggested ensemble opportunities not currently offered in the music program, such as instrumental chamber ensembles and instrumental choirs (e.g., brass or woodwind choirs), and a credit-based marching band that meets during the school day. (Marching band was an extracurricular band activity at Oak Valley High School.) Two students proposed an adaptation of the traditional school band influenced by popular music, in which different ensembles would focus on specific popular musical genres, such as rock, country, or pop. The other was "a class where you are assigned a group of students that like the same music as you and have about the same skill set as you and you attempt to make your own band" (survey response, February 21, 2015).

Popular music courses. A large number of students, both school music participants and nonparticipants, recommended new music courses focused on the kinds of music students enjoy outside of school. Among the many genres mentioned in these responses, the most popular were pop, hip-hop, and rap. Many of these ideas did not explicate how this music might be used in class, but a few students did recognize the need for the songs to be appropriate for school. Several students suggested the addition of courses in which they could learn to play guitar, piano, and drums in both group classes and individual lessons. Students also suggested rock band, pop music performance, and karaoke classes. A few students suggested that courses in popular music might explore multiple genres or focus on a specific genre. Other students

proposed analytical approaches to popular music, such as "dissection of rap lyrics" and "expressing opinions of popular music" (survey responses, February 21, 2015). These ideas suggested a connection between literary and musical arts as an outlet for students to improve both their writing and their critical analysis skills in the form of music journalism. Other musical styles represented among responses included New Age, alternative, country, funk, classic rock, "today's hits," singer/songwriter styles, dubstep, and R & B (i.e., rhythm and blues). A few responses suggested bass, percussion, and ukelele among the instruments that students might learn in school.

Music technology. While represented by a smaller number of responses than either the ensemble or popular courses mentioned above, several students recommended classes focused on music technologies. The most popular music course named in these responses was middle school general music, an exploratory music course that provided introductory experiences with music technologies, guitar, keyboard, and drums. Survey respondents desired courses connected to computer software, such as *GarageBand* and *Pro Tools*, as well as recording technologies. Students mentioned several specific courses in their responses, including studio and electronic music production, creating beats, and courses connected to music industry careers. One student expressed the need for the connection between school music and music careers when he said,

> How to make their own music like lyrics and those who want to be DJ's or a career similar to that to have classes where they could learn with the equipment. Its just there is so many different music careers out there that most students are interested but don't have those music classes. (survey response, February 21, 2015)

World music, creative, and analytical courses. A smaller number of students suggested music classes related to world music, creative music making, music history, and the formal structure of music. Only two students listed musical opportunities connected to specific cultural traditions: Hispanic music, and specifically, mariachi band. One school music nonparticipant shared, "I would like a cultural class where you could learn how music is in other places" (survey response, February 21, 2015). A few students wanted a music or chord theory class or an Advanced Placement music theory course, and a few students specifically requested a music theory course offered in the school's course book. One student wanted a basic theory course focused on "understand[ing] how and why a song becomes popular" (survey response, February 21, 2015). Some students spoke of their interests in creative music making, either in a composition or songwriting course or making music using technology. One nonparticipant wrote about her desire for an opportunity to explore songwriting, guided by a music teacher:

> A one-on-one class where if you were a song writer you have the chance to have a teacher to help you improve your music write[ing] and also help you with the notes that will go [with] the music and could maybe perform it in front of everyone say[ing] 'I wrote this music and I love it because it's me.' (survey response, February 21, 2015)

Other students expressed interest in courses where they could learn about music without performing, such as learning about musical forms and structures and different styles of music and how they were created.

In summary, students shared a wide variety of ideas regarding potential music courses in which they would be interested. Many of the classes proposed by students

centered on additions to the existing vocal and instrumental ensembles and adjustments to existing music classes to include popular musical genres. Students were also interested in creating music (with and without technology), and non-performance courses. The format proposed by respondents for these possible courses included group classes and individual lessons, traditional and popular music instruments, and survey courses and classes focused on specific areas of interest. Only students among the school music participants group believed that the number and array of music classes currently offered at Oak Valley High School were adequate. However, in a separate survey item, 63.7% of school music nonparticipants indicated that they would take a music class if the school offered a course in the music that interested them outside of school.

Engaging More Students in School Music

As described above, all survey respondents answered an open-ended survey item regarding how music educators and administrators might encourage more students to participate in music at school. Among respondents, 10% indicated that they did not have any ideas for engaging more students in school music, while 7.6% expressed their belief that there was nothing that music teachers or administrators could do. Many of the students that did not contribute ideas or believed there was nothing additional that music teachers or administrators could do believed that those who wanted to participate in music classes would make the choice to do. Some music participants expressed opinions that suggested that they did not see any need to engage more students in music or were hesitant about having students involved in the program who might not be very committed. One student remarked, "We have enough participation already" (survey response, February 21, 2015). Another commented, "I would rather have a smaller group

of committed kids than kids who are half way interested in music. To me, being involved in music is a lifestyle that requires 100% commitment" (survey response, February 21, 2015). Other students suggested that the music teachers were already doing all they could to encourage students to participate in music classes.

The largest majority of respondents suggested ideas for engaging more students in school music, with four themes emerging from these responses: promoting the school music program more effectively, perceptions of school music, suggestions for music teachers, and revisions to existing music courses. Many of the ideas for remodeling music courses were similar to those suggested in response to the survey item regarding new ideas for school music (i.e., repertoire selection and offering new classes on topics of interest). Students desired a voice in the selection of music for study, the inclusion of popular music and musicians, and a wider variety of musical styles. Many respondents suggested that new classes might provide opportunities for beginners to join music in middle and high school or be offered based on the interests of students in the school. One student wrote:

> Add more music classes for the students, not only the classes for those who already are in [the] music program or have musical capability, but classes for any students who interest[ed] in music program and/or interest in learning to play an instrument. (survey response, February 21, 2015)

Another student suggested that all freshmen might be required to take a music course to discover whether they would be interested in taking others throughout high school.

Promoting the school music program. Many students, both music participants and nonparticipants, suggested a need for promoting and building awareness about the

school music program within the larger school community. The majority of responses suggested "advertising" and "publicizing" the music program, its activities, and the work of the music students, so other students in the school might be more aware of what the program had to offer. One music nonparticipant said, "Put the word out there more, I didn't even know there was choir in high school and that there was levels of it" (survey response, February 21, 2015). A music student shared her belief that the teachers and the school needed to take an active role in inviting new students into the music fold:

> If the teachers advertised their programs more and got the word out. It's spread a lot through word of mouth and student's personal experiences in the programs, and some kids may only focus on the bad things they hear. But there's not a lot of light shed on the music programs, and I think if the school itself got more involved with them and shined more light on music then more kids would want to be a part of it. A lot of the music programs are closely knit, and there are many connections in them. Other students should want to be apart of that, but we have to show them the possibilities. (survey response, February 21, 2015)

Some music students felt that the music program did not receive the recognition that the sports program at the school received and suggested that the administration could assist in raising school-wide awareness of the accomplishments of the various music programs and students. Several respondents believed it would be helpful if music teachers could show and/or tell students about the activities of the music classes, such as offering opportunities for students to observe a music class or participate in a music class on a trial basis. Other ideas included sending emails to all students around the registration period for the next year's course selection, improving recruitment efforts to

bring in new students, and staging performances specifically for students in the school or including music groups in school assemblies.

Perceptions of school music. Related to a lack of promotion of the school music program was the problematic perception of school music. Students suggested that making music classes more "fun," "interesting," "cool," "appealing," or "exciting" could encourage more students to join. These responses suggested that students may perceive school music courses to be unpleasant, boring, uncool, unattractive, or dull, none of which would likely inspire enrollment. Surprisingly, the largest number of responses among this group were from music students who thought it would help to make music classes fun, suggesting that this may not be how they perceive the very courses in which they enrolled. Students wrote, "Make it sound more fun than it is" (survey response, February 21, 2015). However, other music students felt that they needed to communicate their enjoyment of their school music experience with nonparticipants. One music student wrote of the relationship between hard work and fun in the music classroom:

> They need to make music class seem like more fun and not like it's so much work. I feel that's all the other kids see, is that it's a lot of work. Even though it is a lot of work, we have a lot of fun and I don't think other kids see that as much. (survey response, February 21, 2015)

A few students also commented that music was not "socially acceptable" and that the increased focus on math and science in school resulted in a school experience that "becomes less about creativity and more about perfect grades and getting into college" (survey response, February 21, 2015).

Advice for music educators. Several students wrote comments directed toward music educators, with school music nonparticipants providing twice as many responses as participants in this category. Many students recommended that teachers create an atmosphere that welcomes all students, regardless of their levels of musical ability. One music student expressed a belief that school music courses did not seem to be open to all students, describing it as "closed off" and only for those "with extreme passion, and not anyone who wants to try it" (survey response, February 21, 2015). Nonparticipant students advised teachers to be approachable in their interactions with students and to help students see that music offers "something for everyone." Two school music nonparticipants urged music teachers to secure instruments for those who could not afford them and to provide assistance with transportation to music events. Students suggested that music teachers might be more engaging in the classroom by demonstrating greater enthusiasm in their work. One music student suggested that students be placed in ensembles with others of similar skills to eliminate the need for teachers to review concepts covered in a previous course. For this student, the repetition of "core material" each year was akin to "going back and taking world history again" (survey response, February 21, 2015).

Many school music nonparticipants desired individual attention from the teacher through one-on one assistance, as well as providing support and making time for each student in the class. Many students who were not enrolled in music also wanted music teachers to be sensitive to their individual needs, helping students to be comfortable singing, making music "less complicated," (survey response, February 21, 2015) and lowering standards for performance. This suggestion contrasted sharply with the

comments made by participants regarding a perceived desire for new members to exhibit high levels of commitment to the school music program. This disparity suggested that participants and nonparticipants held different expectations and goals for their school music experiences. This contradiction seemed to support Gates (1991) theory that students discontinued their musical participation when their goals were incompatible with those of the teacher.

School music nonparticipants described the "pressure" they associated with school music, as two students wrote about the need for creating musical experiences with "less pressure" (survey response, February 21, 2015). One student explained how high pressure experiences might lead students to stop taking music: "Know when to stop pressuring a student so much, because that could lead to the student not wanting to be in the music program anymore" (survey response, February 21, 2015). Students also suggested that music events not be scheduled in conflict with other activities and that teachers might be more tolerant of student absences in certain cases, "Understand that some student[s] are involved in other activities that also require lots of commitment and that things can get overwhelming" (survey response, February 21, 2015). Another student addressed the grading policy, which required attendance at music events as part of the students' grade. He stated that he might have participated in more music courses if they were not graded, having received lowered marks for absences when he participated in school music previously.

A majority of the students who completed the survey shared their ideas for engaging more students in school music. These suggestions involved incorporating more popular music in existing music classes, creating new courses to engage beginners at all

levels, and offering new classes based on student interests. Many respondents wrote that efforts to promote the activities of the music program and their students could make others in the school community more aware of what school music has to offer. A number of student comments also indicated that negative perceptions of school music might negatively impact enrollment, encouraging music teachers to find ways to make their courses more enjoyable, interesting, and attractive to students. Finally, respondents advised music educators to create a welcoming and engaging environment for all students, to be sensitive to the individual needs of the students in their classes, and to provide individual, personalized assistance within the group setting for those students who would benefit.

CHAPTER SIX: MIXED METHODS RESULTS AND DISCUSSION

This chapter considers the results of the quantitative and qualitative phases of the study from a mixed methods analytical perspective and presents a discussion of the results. The chapter begins with a review of the quantitative and qualitative results presented in the previous two chapters. The second section connects the results from each of these phases in a mixed methods analysis that forms the basis for the interpretation and discussion of the results. The chapter closes with a model of school music participation informed by these results, the expectancy-value theory and the model of achievement-related choices (Eccles, 2005; Eccles et al., 1983; Eccles et al., 1989; Eccles et al., 1993; Eccles et al., 2005; Eccles & Wigfield, 1995; Wigfield & Eccles, 2002; Wigfield et al., 1991, 1997), and the constraint negotiation theories and the hierarchical model of constraint negotiation (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993).

The mixed methods research question that guided this phase of the study was:

1. In what ways do students' reasons for nonparticipation in secondary school music programs provided in the qualitative interview data help to explain the quantitative results regarding nonparticipation reported in the surveys?

Review of Quantitative and Qualitative Results

The quantitative data analysis revealed significant differences between school music participants and nonparticipants in nearly every variable measured: demographic characteristics, perceptions and attitudes toward school music, self-perceptions of musical ability and difficulty, values for music inside and outside of school, and constraints to school music participation. The researcher considered all of the categorical

and numerical variables measured in the survey to build a logistic regression model to determine which covariates would be significant predictors of school music participation and nonparticipation. The final multivariable logistic regression model consisted of seven predictors, four of which were statistically significant in predicting school music participation: perceptions and attitudes toward school music, and personal perception constraints, conflicting activity constraints, and school music structural constraints. Three predictors were not statistically significant, but were important in the model: race/ethnicity, free or reduced lunch status, and musical task difficulty. The model was statistically and practically significant, had a high classification accuracy rate (89.6%), and was nearly equally accurate in predicting participation (89.9%) and nonparticipation (89.1%).

In the qualitative collective case study of 12 purposefully selected school music nonparticipants, five themes emerged from interview data. The first theme was nonparticipant musicians. Despite the fact that the interviewed individuals did not participate in school music, many of them engaged in musical activities outside of school, and some them described a high level of musical activity. The second theme was activity choice as a hierarchy of personal values; in essence, students participated in those activities they most valued and prioritized the allocation of time and resources for their involvement accordingly. The third theme was school music as a closed system, in which various structures of the existing school music program presented barriers to participation, including courses offered, content, procedures, perceptions of music teachers, and issues related to cost and transportation. The fourth theme related to the power of personal perceptions of barriers to school music participation, such as

perceptions of low musical ability, high musical difficulty, fear of performance, and lack of interest. The final theme was a desire for student-centered pedagogy, with interview participants expressing a desire for new music courses based on such instructional practices that expanded beyond the traditional ensemble offerings. In such courses, students could exercise choice in collaborative and active learning environments, using a combination of peer and self-guided learning with the teacher serving in the role of facilitator. Interview participants suggested a variety of topics for these courses: popular music, beginning instrumental instruction, general music, music technologies, and music appreciation.

Mixed Methods Analysis

The purpose of the mixed methods analysis in this study was to integrate the results of the quantitative and qualitative phases of the study through connected mixed methods data analysis (Creswell & Plano-Clark, 2011). In this mixed methods analysis process, the second data set was connected to, and dependent upon, the analysis and results of the first data set. The analysis of the second data set was used to explain, or build upon, the results of the first phase. These mixed methods results serve as the foundation of the discussion in answering the research questions through the interpretation of both the quantitative and qualitative data.

To connect the data sets from the quantitative and qualitative phases of the present study, the researcher selected cases to explain the significant quantitative results (Creswell & Plano-Clark, 2011). The selected cases were those correctly predicted to be school music nonparticipants by the overall logistic regression model. The researcher also used a purposeful (Creswell, 1998) maximum variation sampling method (Miles &

Huberman, 1994) to select participants from groups identified as underrepresented and overrepresented in school music programs (Elpus & Abril, 2011). To connect the qualitative data analysis to the quantitative results, the researcher began with topic codes based on the significant factors revealed in the qualitative results, as suggested by Creswell and Plano-Clark (2011). The mixed methods data display connecting the quantitative results of the logistic regression model and the demographic characteristics and scale scores for each of the interview participations is displayed in Table 18.

The researcher created data convergence matrices to organize the quantitative and qualitative results in graphic displays by quantitative research question, displayed in the discussion section that follows. The researcher displayed topically related data side by side and used "data convergence labels" (Fitzpatrick, 2011) to describe the degree of alignment between the quantitative and qualitative results. The researcher used four labels to describe the relationship between the results from each phase of the study. When the quantitative and qualitative results aligned, the researcher used the label *confirm*. When the two sets of data provided different results, the researcher used the label *contradict*. When the results were both confirmatory and contradictory regarding different aspects of each data set, the researcher used the label *mixed*. When the results provided different perspectives on the same topic, the researcher used the label *enhance*. For the cases in which either quantitative or qualitative results were missing, the researcher did not assign a label. The full data matrix assisted the researcher in drawing meta-inferences to determine how the qualitative data helped to explain the quantitative results. From the full matrix, the researcher created a smaller joint display that succinctly

Table 18

Mixed Methods Data Display of Quantitative Results and Interview Participant Characteristics

Significant Predictors of School Music Nonparticipation in the Logistic Regression Model							
	Race/ Ethnicity	Free/ Reduced Lunch Status	Perceptions/ Attitudes Toward School Music	Musical Task Difficulty	Personal Perception Constraints	Conflicting Activity Constraints	School Music Structural Constraints
Quantitative Results & Logistic regression significance level	White students underrepresented (-3.6) & Hispanic students overrepresented (3.5) χ^2 (5, n = 319) = 57.76, p < .001, *phi* = .43] LR (p = .021)	Free or reduced lunch recipients overrepresented (2.6) χ^2 (1, n = 319) = 22.14, p < .001, *phi* = -.27 LR (p = .018)	Less positive attitudes Non-participants *(M* = 30.69, *SD* = 10.79) Participants (*M* = 47.37, *SD* = 9.51) LR (p < .001)	High music difficulty Non-participants *(M* = 9.95, *SD* = 3.69) Participants (*M* = 8.01, *SD* = 3.16) LR (p = .017)	Higher levels of constraint Non-participants *(M* = 32.13, *SD* = 10.47) Participants (*M* = 18.70, *SD* = 9.11) LR (p = .002)	Higher levels of constraint Non-participants *(M* = 23.62, *SD* = 8.89) Participants (*M* = 16.10, *SD* = 7.98) LR (p = .001)	Higher levels of constraint Non-participants *(M* = 18.63, *SD* = 6.73) Participants (*M* = 12.81, *SD* = 5.84) LR (p = .003)
Interview Participant Characteristics							
Ayeshia	Hispanic/Latina	Yes	18	5	38	36	13
Carly	White/Caucasian	No	18	10	25	14	13
Daniel	White/Caucasian	No	27	9	18	28	9
Elena	Hispanic/Latina	Yes	23	9	28	25	36

Ibsaa	Black/African American	Yes	33	7	42	24	24
Ignacio	Hispanic/Latino	Yes	31	5	19	19	19
Kahlil	Black/African American	Yes	36	11	26	25	31
Nicole	Hispanic/Latina	Yes	24	15	53	19	24
Olivia	White/Caucasian	No	23	9	22	33	18
Sophie	Hispanic/Latina	No	22	10	53	29	17
Thanh	Asian	Yes	44	18	31	21	13
Trenton	White/Caucasian	No	33	10	22	15	23

Note: The ranges of possible scores for each scale were as follows: Perceptions and Attitudes Toward School Music, 9 – 63, Perceived Task Difficulty, 3 – 21; Personal Perception Constraints, 9 - 63; Conflicting Activity and School Music Constraints, 6 – 42. For attitudes toward school music, lower scale scores indicated less favorable attitudes, while higher scale scores indicated more favorable attitudes. For musical difficulty and constraint experience, lower scale scores indicated lower difficulty and constraint experience, while higher scale scores indicated higher difficulty and constraint experience.

summarized the results (Creswell & Plano-Clark, 2011); this smaller representation appears at the end of this discussion section.

In the discussion that follows, the quantitative results are presented first, followed by the qualitative results that *confirmed*, *contradicted*, *enhanced*, or *mixed* the quantitative results. This presentation allowed the qualitative results from the second phase to explain the significant statistical results from the initial, quantitative phase and to answer the mixed methods research question. The researcher connected these interpretations of the results to past investigations in quantitative, qualitative, and mixed methods research.

Mixed Methods Results and Discussion

Demographic Characteristics

The data convergence matrix connecting the quantitative and qualitative results for the first research question regarding demographic characteristics and perceptions of musical ability and associated task difficulty is displayed in Table 19. A number of statistical differences existed in the demographic characteristics between school music participants and nonparticipants at Oak Valley High School. The results of the statistical analysis revealed significant relationships between participation in school music and sex, race/ethnicity, native language, free or reduced lunch status, highest parental educational attainment, and grade point average. These findings confirmed the most recent national demographic results (Elpus & Abril, 2011) at the school level in Oak Valley. The only two variables in the national level study that were not significant in the present project were reading and mathematics achievement, which were not included as part of the design of this study. In the present study, only familial structure was not significantly

Table 19

Data Convergence Matrix for Research Question 1

Research Question 1: What are the musical and non-musical characteristics of students who participate and those who do not participate in the secondary school music program?			
Quantitative Results	Qualitative Data	Qualitative Themes	Alignment
Sex Participants (female, *n* = 108; male, *n* = 59) Nonparticipants (female, *n* = 76; male, *n* = 76)	No interview data regarding sex	No qualitative parallel	
Race/ethnicity Participants [American Indian/Alaskan native, *n* = 3; Asian, *n* = 8; Black/African American, *n* = 7; Hispanic/Latina(o), *n* = 15; Multi-racial, *n* = 9; Native Hawaiian/Pacific Islander, *n* = 1; White/Caucasian, *n* = 124] Nonparticipants [American Indian/ Alaskan native, *n* = 7; Asian, *n* = 13; Black/African American, *n* = 10; Hispanic/Latina(o), *n* = 51; Multi-racial, *n* = 20; Native Hawaiian/Pacific Islander, *n* = 1; White/ Caucasian, *n* = 50]	Ibsaa: "When you come to the United States, like really some obstacles. Because of living, like, working full-time…Pay my bill and everything." Elena: "I'm not really sure what happened, but starting second semester [of fifth grade], we went to Mexico for six months, and then I came back right before sixth grade started. When I was doing my registration, I said I wanted band, but they said I couldn't do it."	No qualitative parallel	
Native English Participants (native English, *n* = 156;	Ibsaa, "I just learn English a little bit. I just defense me from bullying."	No qualitative parallel	

other native language, *n* = 11) Nonparticipants (native language, *n* = 108; other native language, *n* = 44)	Thanh: "At that time, my English was not so good. There was a music program in middle school, but I didn't know very much, so I didn't enjoy it."		
Free/reduced lunch status Participants (yes, *n* = 54; no, *n* = 113) Nonparticipants (yes, *n* = 90; no, *n* = 62)	Ignacio: "At one point when the teacher told us about the uniform, we had to pay some money for it. At that time my mom was having troubles at her job. She couldn't pay for it." Daniel: "I mean, that's [cost] not a problem at all. Going wherever, paying for whatever, that's just not a problem."	School music as a closed system	Mixed
Highest parental educational attainment Participants (don't know, *n* = 16; high school diploma or less, *n* = 54; two-year college, *n* = 17; four-year college, *n* = 26; Master's or advanced degree, *n* = 53) Nonparticipants (don't know, *n* = 25;high school diploma or less, *n* = 74; two-year college, *n* = 15; four-year college, *n* = 21; Master's or advanced degree, *n* = 17)	Thanh: "My parents drop out of school in second or third grade in Vietnam. They don't really know much about school, and they don't know much about the music program here."	No qualitative parallel	
Grade point average Participants (0 to 2.0, *n* = 4; 2.1 to 3.0, *n* = 56; 3.1 to 4.0, *n* = 105) Nonparticipants (0 to 2.0, *n* = 18; 2.1 to	Ayeshia: "I kind of stopped at that point, because it was getting really bad where both of them [class grades] actually were D's. I'm usually an A or B student." Trenton; "Then in Senior [next] year, I	No qualitative parallel	

3.0, *n* = 59; 3.1 to 4.0, *n* = 73)	have a full schedule with AP classes. I need to focus on school next year and I can't really be focusing on something like band."		
Perceptions & attitudes More positive attitudes Participants (*M* = 47.37, *SD* = 9.51) Nonparticipants (*M* = 30.69, *SD* = 10.79)	Carly: "I think it's cool for students to be able to get up and show what they do and how good at singing they are, and playing instruments." Trenton: "They [jazz band students] look tired, and they're sitting there, and they're playing the same song over and over again. It just seems lackluster."	The power of personal perceptions	Contradict (Mixed for some items)
Perceived musical difficulty Lower musical difficulty Participants (*M* = 8.01, *SD* = 3.16) Nonparticipants (*M* = 10.16, *SD* = 3.95)	Ayeshia: "I liked some of them [choir songs], but there was some that were overly difficult for me. I could not pronounce any of the words and I'll totally forget." Nicole: "It got a little harder, because most of our songs were just, like, high notes. I know them, but I wasn't good at them."	The power of personal perceptions	Confirmed
Perceived musical ability Higher competence beliefs Participants (*M* = 21.07, *SD* = 4.09) Nonparticipants (*M* = 16.21, *SD* = 5.61)	Carly: "There was a lot of better singer in the class, and just being in the class with them, I thought, 'Well, they're a lot better than me. Maybe I should step down a notch and let them shine,' or something."	The power of personal perceptions	Confirmed

	Sophie: “Apparently I wasn’t good enough, because I didn’t know how to read notes, so I never was able to actually play that instrument, but with choir I got better later on, but I was never that great.”

Note: All quantitative results significant ($p < .01$)

related to school music participation, despite the fact that slightly more school music nonparticipants reported living with one or neither parent or guardian than participants. Music participants in the sample were more likely to be female, White, native English speakers with grade point averages above 2.0, who did not receive free or reduced school lunch and lived with both parents, one of whom held a Master's or other advanced degree.

The researcher compared the student populations underrepresented and overrepresented among school music participants at Oak Valley High School with those identified in the national-level study. While the researcher identified fewer student populations to be under- and overrepresented at Oak Valley, this was likely due to a smaller number of students within the various demographic categories examined by Elpus and Abril (2011), although the results obtained in the present study confirmed the national demographic results. In both studies, students who were White or the children of parents with advanced degrees were overrepresented in school music, while students who were Hispanic or non-native English speakers were underrepresented. In the present study, Hispanic students, nonnative English speakers, and those who received free or reduced school lunch were overrepresented among nonparticipants at the research site.

The quantitative results of the present study confirmed the relationship between many of these demographic characteristics and school music participation discovered by other authors. Sex (Kinney, 2010; McCarthy, 1980; Stewart, 1991), race/ethnicity (Chenault, 1993; Horne, 2007), native language (Lorah et al., 2014), socioeconomic status (Corenblum & Marshall, 1998; Kinney, 2010; Klinedinst, 1991; McCarthy, 1980; Stewart, 1991), and various measures of academic achievement, such as math

(Klinedinst, 1991) reading (Mawbey, 1973, Kinney, 2010; Klinedinst, 1991; McCarthy, 1980) or academic track (Stewart, 1991) have all been found to be significantly and positively related to school music participation. In many of these studies, demographic characteristics were significant predictors in statistical models of participation and nonparticipation. In the present study, race/ethnicity and free or reduced lunch status were predictors of school music participation and nonparticipation in the logistic regression model. While neither of these were significant predictors in the model, the necessity of their inclusion suggested a connection between race/ethnicity and socioeconomic status. This supported the results of other authors (Corenblum & Marshall, 1998; Costa-Giomi, 2004; Lorah et al. 2014; Wigfield & Eccles, 2002) who have suggested that socioeconomic factors may interact with other characteristics, such as race and ethnicity, or academic achievement. Wigfield and Eccles (2002) suggested that socioeconomic factors had a confounding effect on the differences between groups related to race and ethnicity.

The qualitative data from the interviews provided little information related to the demographic characteristics of school music nonparticipants. The focus of the interviews was on the personal experiences of students with music inside and outside of school and their perceptions of the barriers that obstructed their participation to school music. The only theme related to any of these characteristics that emerged from analysis of the interview transcripts was school music as a closed system, in which cost and transportation issues were associated with free or reduced lunch status, the socioeconomic indicator used in the present study. The qualitative data suggested that

students who were less socioeconomically advantaged faced additional challenges in meeting the demands of school music structures.

In the interviews, four students discussed cost as a prohibitive factor to school music participation, with one describing how the music teachers waived a fee so that the student could continue to participate. Two interview participants discussed the challenges of securing transportation to concerts held in the evenings, as well as the problems of dependence on scant public transportation when music activities required time after school. Some of the interview data confirmed the operation of cost and transportation, related to socioeconomic factors, as barriers to school music participation. However, three students reported no financial barriers, suggesting that, for them, there were no economic barriers to school music participation. These qualitative results, coupled with the faculty's efforts to remove or reduce monetary barriers, produced mixed results when connected to the quantitative data.

While no themes emerged that provided additional insight into how factors such as one's gender or parental educational attainment might impact potential participation in school music programs, the interviews contained data related to native language and ethnicity. Two of the interview participants, Thanh and Ibsaa, provided valuable perspectives on school music as immigrant students who had been in the United States for less than six years. Both students described how their lack of English skills made participation difficult in the early stages. Thanh described how he did not absorb much from his first school music experience in middle school because of his poor English skills. While he wanted desperately to learn to play an instrument, there were no opportunities for him to do so in the school program at the grade level that he started

school in Tremont. Ibsaa, who had nearly graduated in his home country, needed to complete two additional years of school, including meeting the English language requirements, in order to graduate. He spoke of the challenges he faced in balancing his responsibilities as a full-time student who also worked full-time to pay his bills. Based on information provided by a friend, he believed that school music required time outside of school, which he could not accommodate because of his job. These data supported the assertion that low participation among English Language Learners might be due more to a lack of opportunity than to a lack of interest (Lorah et al., 2014) and the additional English language courses required (Elpus & Abril, 2011). The experiences of these two young men explained the difficulty they perceived to school music participation, despite their desires to do so.

Social justice scholars argued that music education systems perpetuate inequality and the marginalization of groups based on race, ethnicity, religion, disability, sex, and sexuality, among others (Gould, Countryman, Morton, & Stewart Rose, 2009). Bradley (2007) argued that low participation rates among racial subgroups in school music suggested that the current structure of school music does not promote inclusion: "If we look closely, we may recognize that there is much about our profession that begs examination of its possible role in perpetuating inequities, racial inequities among them" (p. 134). Recognizing the differences that exist between students who participate in school music and those who do not is an important first step to engaging a more diverse group of music learners to the school program.

Parental values regarding school, particularly the importance of maintaining good grades, were shown to be related to student grade point average. Three interview

participants, Ayeshia, Olivia, and Thanh, described how their parents expected them to earn good grades first and that other school activities, such as music and sports, were considered secondary. For Ayeshia, this meant discontinuing school music when her grades suffered. However, contrary to the statistical results that identified significant differences between groups regarding grade point average (Elpus & Abril, 2011) and other academic achievement measures (Fitzpatrick, 2006; Kinney, 2010; Klinedinst, 1991; Mawbey, 1973; McCarthy, 1980), all of the nonparticipants selected for the interview reported grade point averages above 2.1.

Previous quantitative studies have considered non-musical factors, such as demographic variables, as predictors of school music participation (Chenault, 1993; Corenblum & Marshall, 1998; Kinney, 2010; Klinedinst, 1991; Lorah et al., 2014, Mawbey, 1973; McCarthy, 1980; Stewart, 1991). In some cases, these models reported participation with higher accuracy than nonparticipation (Klinedinst, 1991; Morehouse, 1987; Siebenaler, 2006), suggesting the limited utility of models based primarily on demographic variables. The identification of variables that related to, or predicted, school music participation or nonparticipation in these studies provided little information about how these factors actually operated in students' lived experiences. The qualitative data in the present study highlighted the ways in which these factors operated by limiting or obstructing opportunities for musical participation. The selection of interview participants from varied socioeconomic and ethnic backgrounds, as well as an equal number of males and females at different grade levels, brought a variety of perspectives to the qualitative data.

The qualitative results did not reveal many themes connected to the experiences of students based on demographic characteristics, though interview data provided information about the lived experiences of particular students. The intention of the researcher was to allow these perceptions and experiences to emerge organically out of the interview participants' accounts, allowing the opportunity for follow-up questions to provide further clarification. The limited amount of information that arose in the interviews related to characteristics such as gender and ethnicity suggested two possible interpretations. One possible, and somewhat optimistic, interpretation might be that students did not believe that these particular characteristics were salient to their school music experience, either positively or negatively. It is also possible that these issues would only have been articulated had the researcher asked questions designed to differentiate experience based on group membership. However, because issues related to native language and socioeconomic status surfaced in the interviews, it seemed likely that the participants spoke about those factors that were most prominent for them personally. This did not indicate that sex, ethnicity, or other demographic factors did not play a role in nonparticipation, but rather, that these students did not connect their experiences directly to such personal demographic characteristics.

One positive finding in the qualitative data was the effort of one music teacher who assisted a student in overcoming a financial obstacle by waiving a required band fee. This was an accommodation that other music faculty at Oak Valley also reported making for students in their ensembles. The faculty's awareness of the needs of their students and their willingness to find ways to support continued participation is one example of the kind of school support that can assist students in overcoming certain barriers to school

music participation. This is perhaps one of the practical uses of this information regarding demographic differences. In order to sustain the participation of more students from groups currently underserved by school music, teachers might identify those students who may require additional support and create methods to minimize potential obstacles. These actions on the part of a teacher may be explicit or implicit, but caution should be exercised in making such evaluations to avoid making errant judgments or broad generalizations. The openness with which students spoke to the researcher in the interviews (a stranger they had just met) suggested that, for music educators, the act of listening to the voices of individual student participants might provide some of the most reliable information for making such accommodations.

While not a specific focus of the present study, it is worth noting that an ethnic and socioeconomic misalignment existed between the music faculty at Oak Valley High School and attending students. This confirms results reported by Horne (2007) and Doyle (2012) regarding the lack of diverse role models among music educators and the mismatch that often exists between the backgrounds of teachers and students. Unfortunately, the disproportionate number of school music students who are White and socioeconomically advantaged, in this sample and others previous identified, does not provide much hope this will change in the near future. However, it does serve to illustrate the need for recruiting and retaining a more diverse student population to school music as a first step toward building a more diverse music education profession, one of the arguments made by authors in critical race theory (Bradley, 2006, 2007; Ladson-Billings, 1995a, 1995b; Sleeter, 2001).

Overall, the results regarding the statistical significance of several demographic characteristics were mixed when explained by the qualitative data. While many of the demographic characteristics did not emerge as themes in the qualitative data, data surfaced in individual cases that contributed to building an understanding of the experiences of various groups within the school music nonparticipant population. However, it cannot be presumed that the experiences of the interview participants were in any way representative of the experiences of other students from the same groups, as these experiences can only truly illustrate the truth of the individual who shared them. The qualitative data highlighted the need for more research in music education that includes students from diverse groups in order to begin to learn from their experiences. These mixed results confirmed the assertion of Crawford and his colleagues (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993) regarding the constraint experience as an individually constructed phenomenon, influenced by social and environmental factors in regard to the type and intensity of constraints encountered.

Musical Characteristics

The researcher either modified or created the scales used for this study to explore participation and nonparticipation in school music as a general construct representing music performance, theory, and appreciation courses in one high school in the Midwestern region of the United States. Eccles and her colleagues created and used the Expectancy-Value scales for school subjects (Eccles et al., 1983; Eccles et al., 1989; Eccles & Wigfield, 1995; Wigfield et al., 1991) and instrumental music (Eccles et al, 1993; Wigfield et al.1997). The researcher modified these scales to measure beliefs, perceptions, and values for school music as a school subject. With the modifications to

the wording of the items for this use in the present study, all of the scales reached an acceptable level of reliability in the main study, confirming results recently published by McPherson and Hendricks (2010) and McPherson and O'Neill (2010). The researcher-created attitude scale for this project also had a high level of reliability, suggesting that personal evaluations of the school music program and perceptions of support (informed by Corenblum and Marshall, 1998) were strong predictors of school music participation.

In the results that follow, much of the qualitative data were mixed between cases, due to the unexpected discovery of a number of interview participants with vibrant, active musical lives outside of school. These instances of contradictory perceptions regarding music within the qualitative data both confirmed and contradicted the quantitative data, with the exception of perceptions and attitudes toward school music. These contradictions within the school music nonparticipant group contributed to the richness of the results and suggested that school music nonparticipants were not necessarily non-musical. The qualitative data indicated there might be two groups within school music nonparticipants: *nonparticipant musicians*, who participate in music outside of school, and *nonparticipants*, who did not actively make music, but likely used music in their daily lives.

Attitudes toward school music. As anticipated, the quantitative results indicated that school music participants possessed significantly more positive attitudes toward school music. Students who had favorable opinions of their school music program and felt supported by their parents, music teachers, and friends regarding their involvement in school music participated in such programs.

The qualitative results regarding attitudes toward school music contradicted the quantitative results. The majority of the school music nonparticipants interviewed expressed positive overall evaluations of the school music program, which contradicted the statistical results. Interview participants described school music in positive terms and generally believed that it was, as Nicole described it, " a pretty good program to have in school" (Nicole, personal communication, April 3, 2015). These results concerning attitudes toward school music were more varied than the extant literature suggested. Previous researchers reported that negative attitudes toward music related to nonparticipation (Frakes,1984; Morehouse, 1987) or served as barriers to participation (Harland & Kinder, 1995). The positive evaluations of school music in the qualitative data might have reflected the desire of interview participants to please the researcher with a desirable answer. However, a careful review of the interview participants' descriptions in the transcripts and of the researcher's field notes, revealed that the students seemed to be describing a school program they thought was good for those who were interested, but not necessarily for them personally. Harland and Kinder (1995) suggested that positive attitudes toward the arts functioned as motivations for participation, but this was not true for the interview participants in this study. Despite their positive evaluations of school music at Oak Valley, many of these students were also critical of various elements of the music program, particularly in relation to their own participation. This interpretation would support Harland and Kinder's conceptualization of negative attitudes as barriers.

The contradictions that surfaced in the qualitative data suggested the presence of indirect effects that mediated the relationship between attitudes and perceptions toward school music and participation in such programs. The researcher did not test such

indirect effects in the present study, but the disagreement between the quantitative and qualitative data may be an indication that indirect pathways exist. These contradictions may also suggest that other factors not explored in this study may influence nonparticipation, despite positive evaluations of school music programs.

In addition to overall perceptions and attitudes toward school music, the perceptions and attitudes scale also contained items concerning the perceived support of teachers, parents, and peers. The qualitative data were mixed regarding perceptions of the music teacher, with students describing both teachers they enjoyed and those they did not. Student perceptions of parental and peer support confirmed the statistical results that perceptions of low support contributed to nonparticipation. Interview participants described parents who did not actively support their involvement in school music and friends who influenced their decisions to discontinue, or did not support, their musical participation.

The disagreement between the interview participants' positive perceptions of school music and their nonparticipation supported the gap discovered by Mizener (1993) between an enjoyment of singing and a lack of desire to participate in choir. Corenblum and Marshall (1998) also reported mixed results regarding student attitudes toward music, concluding from their model that student attitudes were not significantly related to intentions to continue band participation. The present study confirmed the importance of support from parents (Corenblum & Marshall, 1998; Davidson et al., 1996; Davidson et al., 1995/1996; Hedden, 2007; McPherson, 2009; O'Neill et al., 2001; Ryan et al., 2000; Simpkins et al, 2012), peers (Adderley et al., 2003; Davidson, 1999; Gouzouasis et al, 2008; Kennedy, 2002; O'Neill et al., 2001; Patrick et al., 1999; Siebenaler, 2006;

Stewart, 2005; Sweet, 2010; Warnock, 2009), and music teachers (Davidson et al., 1998; O'Neill et al., 2001; O'Neill, 2005) as factors positively influencing participation in school music activities. The support of these "significant others" (Corenblum & Marshall, 1998, p. 138) emerged most strongly in the qualitative data regarding their relationships with individual musical values, to be discussed below.

Perceived musical ability and difficulty. As anticipated, the quantitative results revealed that school music participants reported higher perceptions of their musical ability and lower perceptions regarding the difficulty of musical tasks than nonparticipants. Students who were confident in their musical abilities, expected to do well in school music, and believed that music was not too challenging tended to participate in school music.

The qualitative results revealed a theme related to perceptions of musical ability and difficulty, the power of personal perceptions, which was mixed in its connection to the quantitative results. Most interview participants indicated a low level of self-belief in their musical competence, which confirmed the statistical results. Some of these students compared their personal musical ability to their perceptions of the abilities others, representing feelings of inferiority. The students who expressed inferiority were former school music participants who reflected upon evaluations of their abilities, compared to others, when they participated in band and choir. For some interview participants, a lack of confidence in musical ability combined with high evaluations regarding the difficulty of specific musical skills in playing instruments and singing, resulting in feelings of frustration. This frustration of striving to achieve a prescribed level of technical facility

was one of the factors that eventually resulted in the decision to discontinue. These qualitative data confirmed the statistical results.

The qualitative data that contradicted the statistical results surfaced as a few interview participants commented about their strong musical competence or discussed their changing perceptions of musical difficulty. Two students described how they were able to overcome the difficulty of learning an instrument in the early stages, thus navigating this constraint as their skills improved. These students reported continued participation in music outside of school for a substantial amount of time each week. In this way, their high musical self-beliefs and low evaluations of difficulty more closely resembled school music participants, though their musical activity occurred in a different context. Therefore, while the overall qualitative data were mixed, both the confirmatory and contradictory results supported the quantitative statistical results regarding perceptions of musical ability and associated difficulty. When students participated in music, whether inside or outside of school, they possessed high evaluations of musical competence and low evaluations of musical difficulty. Therefore, the qualitative results confirmed the quantitative results and supported the existence of nonparticipant musicians and nonparticipants as two separate groups. These contradictions might suggest the presence of indirect effects that influence participation in the school music program, despite strong beliefs in musical ability and low perceptions of musical difficulty. In the qualitative data, nonparticipant musicians described musical participation outside of school that were substantially different that those offered as part of the school music program. It might be possible that the structure of school music programs might be one such mediating factor.

Despite the contradictions among the school music nonparticipant qualitative data, the overall results supported those of earlier research regarding perceptions of musical ability and difficulty. McPherson and O'Neill (2010) and McPherson and Hendricks (2010) used the expectancy/value theory to explore motivations for school music, with music students reporting higher musical competence and lower difficulty than students who did not enroll in music courses. Perceived musical ability was one factor that predicted involvement (O'Neill et al., 2001) and enrollment and level of engagement (Yoon, 1997) in instrumental music. Students who were confident in their musical abilities continued to participate in musical activities (Austin, 1990; Campbell, 2009; Davidson, 1991), while those who believed they lacked musical ability (Rawlins, 1979; Wolfle, 1969) discontinued. Students also discontinued their participation when they encountered higher levels of difficulty than expected in learning an instrument, often in the beginning stages of engagement (Martignetti, 1965). Eccles et al. (1983) suggested that perceptions of task difficulty might influence perceptions of ability over time, resulting in decreased confidence in ability, a position supported by the qualitative data from former music participants in the present study.

Perceived musical values for music inside and outside of school. The data convergence matrix connecting the quantitative and qualitative results for the second research question regarding musical task values is displayed in Table 20. The quantitative results revealed significant differences in perceived task values for music between school music participants and nonparticipants for music inside and outside of

Table 20

Data Convergence Matrix for Research Question 2

Research Question 2: How do participating students' perceptions of music inside and outside of school influence their participation in music activities?			
Quantitative Results	Qualitative Data	Qualitative Themes	Alignment
Usefulness – music Participants (*M* = 14.12, *SD* = 4.29) Nonparticipants (*M* = 10.68, *SD* = 5.04)	Trenton: "I think everyone should be playing music all the time, in my opinion….it's a life learning experience and it's something that could change a person's life forever."	Choice as a hierarchy of personal values	Enhanced
Usefulness – school music Participants (*M* = 5.39, *SD* = 1.44) Nonparticipants (*M* = 3.28, *SD* = 1.74)	Trenton: "I can get good grades without band, and I can hang out with friends without band."	Choice as a hierarchy of personal values	Enhanced
Usefulness – outside music Participants (*M* = 5.10, *SD* = 1.71) Nonparticipants (*M* = 3.49, *SD* = 1.92)	Ignacio: "I like my other band better. That's also getting me into the future…becoming a famous musician."	Choice as a hierarchy of personal values	Enhanced
Interest – school music Participants (*M* = 11.19, *SD* = 2.58) Nonparticipants (*M* = 6.05, *SD* = 3.36)	Daniel: "And I think too, like high school, there's not that middle school class where its' just like general music….Nothing where you can just go in and…like learn how to play the piano or mess around with drums."	Choice as a hierarchy of personal values	Enhanced
Interest – outside music Participants (*M* = 10.34, *SD* = 3.36) Nonparticipants (*M* = 7.68, *SD* = 3.75)	Elena: "My dad's side of the family…nearly all of them play guitar, so I kind of wanted to do that too….I do online	Choice as a hierarchy of personal values	Enhanced

	things, but it's going okay."		
Importance – school music Participants (M = 16.53, SD = 3.97) Nonparticipants (M = 10.24, SD = 4.81)	Kahlil: "When I was in middle school, I thought music class was all types of fun and stuff, but in high school…I just tried to get all the classes I needed to be done."	Choice as a hierarchy of personal values	Enhanced
Importance – outside music Participants (M = 15.35, SD = 4.74) Nonparticipants (M = 10.83, SD = 5.27)	Carly: "It just takes my mind off everything and gives me a sense of feeling in control of everything and being able to express myself through playing."	Choice as a hierarchy of personal values	Enhanced

Note: All quantitative results significant ($p < .01$)

school. Participants reported significantly higher values than nonparticipants for usefulness, interest, and importance, both for music inside and outside of school; the difference between means was greater for school music than for music outside of school. These results suggested that students who believed school music was useful, interesting, and important were more likely to participate in music at school and outside of school. Students who enrolled in school music courses reported higher values for school music, while nonparticipants reported higher values for music outside of school. Despite a higher value for music outside of school, only about half of the nonparticipants reported involvement in formal musical activities outside of school. Among the nonparticipant group, those who participated in musical activities outside of school reported significantly higher values for outside music than those who did not. These results suggested that students' context-specific musical values related to the places in which they elected to become involved in music making. However, in their responses to the survey, the majority of students reported that they would enroll in a music course at school if one were offered in a style of music that interested them outside of school.

The qualitative results included a theme, choice as a hierarchy of personal values, that related to the differences in values between school music and music outside of school. The qualitative results enhanced the statistical results as interview participants described how their prioritized values for various activities influenced their activity choices. A temporal element emerged in this data, as well, as these students spoke of the restrictions on their time and shared how their priorities affected their decisions regarding scheduling and managing their various activities. In addition, students described how the influence of others had an effect on their activity values and how their support related to

the activities in which they participated. For the interview participants, parents had the strongest influence, followed by peers, then non-music teachers.

It was not surprising that school music participants reported higher musical values than nonparticipants, which confirmed the findings of other studies exploring values (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010; O'Neill et al., 2001). Intrinsic motivations, such as interest and enjoyment, were stronger motivators for school music participation than extrinsic motivations, often expressed by those who discontinued (Hurley, 1992; Jorgenson, 1974; Pitts et al., 2000; Waters et al., 2014). A lack or loss of interest was one of the most commonly cited reasons for discontinuing musical participation (Horne, 2007; Martignetti, 1965; Rawlins, 1979; Wolfle, 1969). While other authors found values for the usefulness of, interest in, and importance of music outside of school were higher than those for school music (O'Neill et al., 2001; McPherson and Hendricks, 2010), this was not true in the present study. In the present study, overall values for the usefulness, interest, and importance of school music were higher than those for music outside of school. However, school music participants valued school music more, while nonparticipants valued music outside of school more. Perceptions of ability and difficulty both influence values, as students value what they believe they can do well and do not value those things they believe they cannot do well or find difficult (Eccles et al., 1989; Eccles & Wigfield, 1995; Wigfield & Eccles, 2002; Wigfield et al., 1991).

The hierarchical relationship of values in music revealed in this study confirmed the results of other studies in which values predicted activity choice and course enrollment (Eccles, 2005; Eccles et al., 1983; Eccles et al., 1993,O'Neill et al, 2001).

These results also confirmed those of Hurley (1992), who reported that students who discontinued music experienced a change in values in which other activities became more important. Some of the most common reasons for discontinuing musical participation in other studies related to a desire to focus on other activities (Brown cited in Boyle et al., 1995; Horne, 2007; Martignetti, 1965; Wolfle, 1969) and a lack of time (Brown cited in Boyle et al., 1995; Horne, 2007; Wolfle, 1969). However, as children age, their ability self-perceptions and values decrease, leading to a diminished probability of engagement (Eccles et al., 1983; Wigfield & Eccles, 2002; Wigfield et al., 1997), a finding that emerged in the qualitative data for the present study as a loss of interest in school music for former music participants. Hultsman (1992) described loss of interest as a symptom of changing patterns in activity preference.

Eccles and her colleagues reported that the beliefs and values of parents and teachers related to those of their children and students (Eccles et al., 1983; Wigfield & Eccles, 2002; Wigfield et al., 1997). Several studies have also examined the role of parents in the formation of the musical values of their children (Davidson et al., 1995/1996, 1996; McPherson, 2009; Simpkins et al., 2012; Yoon, 1997), finding parenting beliefs and behaviors to be important forces in shaping children's musical competence and participation. The qualitative data in the present study suggested that parental influence was the strongest factor in shaping values for activities and supporting participation in music programs. Consistent with other studies, the influence of peers (Adderley et al., 2003; Davidson, 1999; Gouzouasis et al, 2008; Kennedy, 2002; O'Neill et al., 2001; Patrick et al., 1999; Siebenaler, 2006; Stewart, 2005; Sweet, 2010; Warnock, 2009) was also important, particularly in decisions to discontinue.

School Music Constraints

The data convergence matrix connecting the quantitative and qualitative results for the third research question regarding school music constraints is displayed in Table 21. As the theory of constraint negotiation (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993) had not previously been explored in music education, the researcher created scale items informed by existing literature in related fields (Harland & Kinder, 1995; Hultsman, 1992; Searle & Jackson, 1985; Waters et al., 2014; Wolfle, 1969). The results of a principal components analysis revealed five components encompassing 29 of the 33 constraint items. These items were classified according to the three categories proposed by Crawford and his colleagues (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993): personal perception constraints (i.e., intrapersonal), social support constraint (i.e., interpersonal), and financial and transportation, conflicting activity, and school music structural constraints (i.e., structural). These results confirmed the existence of three constraint levels in school music participation as proposed by the original authors. The fact that the items regarding school music all loaded strongly on one factor suggested that context-specific constraints were one important factor for differentiating the experiences of school music participants and nonparticipants. The scales were all determined to be reliable, supporting their use in music education research. The quantitative results revealed significant differences in constraint experiences for all five constraint categories (i.e., personal perceptions, financial and transportation, conflicting activities, school music structures, and social

Table 21

Data Convergence Matrix for Research Question 3

Research Question 3: What barriers and other factors contribute to student nonparticipation in secondary school music programs?			
Quantitative Results	Qualitative Data	Qualitative Themes	Alignment
Personal perception constraints Participants (M = 18.70, SD = 9.11) Nonparticipants (M = 32.74, SD = 11.20)	Sophie: "I looked at all of the band members in the percussion section and I was like, 'They're way better than I am. They're more experienced.'" Kahlil: "I'm not the talent. I'm not great, but I know I have a little bit of skills in music."	The power of personal perceptions	Confirm
Cost & transportation constraints Participants (M = 6.82, SD = 4.30) Nonparticipants (M = 9.00, SD = 5.03)	Ayeshia: "Sometimes we would have concerts. Sometimes I would not have a ride for that." Olivia: "The cost was a big deal….It's pretty simple. We just don't have the money to [participate in music.]	No qualitative parallel	
Conflicting activity constraints Participants (M = 16.10, SD = 7.98) Nonparticipants (M = 23.62, SD = 8.89)	Daniel: "I'm saying, like, morning lifting…and then practice after school and it was just…I'm not getting home until after 7:00." Ignacio: "We had [banda] gigs on the	Choice as a hierarchy of personal values	Confirm

	weekends too…This is the reason why marching band was kind of a bother for me. It was in the way, so I had to move it aside so I can focus on my band."		
School music structural constraints Participants (M = 12.81, SD = 5.84) Nonparticipants (M = 19.27, SD = 7.65)	Olivia: "I didn't start as a freshman. I don't know, I felt like maybe I shouldn't do it…I'm, like, too far into high school to even start." Elena: "I think they take it [school music] very seriously, so it's hard to get into it a bit later than most students. Like, if you want to get in your junior year, you can't, because they're so serious about having background knowledge."	School music as a closed system	Confirm
Social support constraints Participants (M = 9.77, SD = 5.41) Nonparticipants (M = 11.73, SD = 5.63)	Daniel: "Maybe a little more influence from my family. Just, hey, try this out….I think if my middle school music teacher would have said something, maybe. Like, 'Oh, I want you to try this in high school.'" Nicole: "At first I told my parents, they were really excited. Then at the same time they were like, "Are you sure you want to do this because you don't seem like the kind of person that would try to join something like this.'"	No qualitative parallel	

Note: All quantitative results significant ($p < .01$)

support) between school music participants and nonparticipants. Nonparticipants reported significantly higher levels of constraint in every category than participants, suggesting that students who experienced higher levels of personal, social, and structural constraints were less likely to participate in school music. The results of the logistic regression model indicated that personal perception, conflicting activity, and school music structural constraints were significant predictors of school music participation and nonparticipation. The importance of constraint factors in the logistic regression model suggested that constraint negotiation theory provides a new theoretical lens through which we might examine differences between participation and nonparticipation in school music.

The qualitative results of the present study confirmed the statistical analyses of the quantitative results, as three themes emerged related to the constraints to school music. The first theme, the power of personal perceptions, connected to the personal perception constraints; the second theme, choice as a hierarchy of personal values, connected to conflicting activity constraints; and the third theme, school music as a closed system, connected to school music structural constraints. Together, these qualitative themes confirmed the quantitative results regarding the impact of constraints on school music participation. Within the theme of school music as a closed system, interview data connected financial and transportation constraints with school music participation for a few interview participants. Interview data regarding parental and peer support related to the theme of choice as a hierarchy of personal values, as these students discussed the influence of their parents and friends regarding their activity values and involvement.

The conceptualization of personal perceptions and prioritized values for other activities as constraints to school music participation presented the negative case of the extant literature presented in earlier sections. As much as personal evaluations and the associated values of a particular activity can facilitate individual decisions to participate, these factors can also inhibit participation when personal evaluations are low. Constraint negotiation theory (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993) provides an operational context in which individuals make subjective evaluations that inform engagement and influence the level of participation. The quantitative component of this study found constraints to be significant predictors of participation and nonparticipation in school music, and the qualitative data explained how these constraints functioned as barriers in the lives of high school music nonparticipants. These results supported the assertion by Crawford and his colleagues that participation is the act of negotiating constraints at various levels, and, once a constraint is perceived to be insurmountable, it becomes a barrier, resulting in nonparticipation. This study confirmed the utility of constraint negotiation theory as a new theoretical perspective from which to examine school music participation.

In previous sections, the researcher connected personal perception and conflicting activity constraints to the extant literature. Research investigating various elements of the school music program revealed that the teacher's personal characteristics (Davidson et al., 1998; Horne, 2007; O'Neill, 2005), teaching style and methods (Brakel, 1997; Groeling, 1975), and the structure and timing of instruction (Gamin, 2005; Hartley, 1996; Hartley & Porter, 2009) related to student retention in school music programs. For

interview participants in the present study, these factors emerged as both constraints in, and barriers to, school music participation.

The qualitative data revealed the important role that music teachers played in sustaining, or unwittingly discouraging, participation in school music. Four interview participants discussed how their music teachers inside and outside of school supported and encouraged their musical development. Unfortunately, five others shared negative characterizations of their music teachers that contributed to undesirable experiences with, or perceptions of, school music. These data pointed to the significance of the role of the music teacher in establishing positive and caring relationships with students. Having this personal connection with the music teacher was important for Trenton, who said:

> I think if the teacher didn't really just ask me, but they sat me down and maybe took some time out of their day and I felt like they actually wanted to connect with me, that would definitely change my interest a lot if I want to join or not. (Trenton, personal communication, April 8, 2015)

Whether this would really have made a difference for Trenton is uncertain, but his comment suggested that he might at least consider such an invitation. Nicole's description of both an "encouraging" and a "harsh" teacher (Nicole, personal communication, April 7, 2015) suggested that students were sensitive to their interactions with their teacher. Music teachers have a special opportunity within the educational system to build long-term relationships with students and families over the course of their musical involvement. Kennell (2002) suggested that the music teacher-student relationship operated as an expert-novice dyad, even in ensemble settings where the conductor shifts between the group and individuals. Jones (1975) suggested that one-on-

one instructional settings were particularly powerful, constituting a continuation of the parent-child relationship that was "as personal as any in his life" (p. 46).

The idea that school music structures might operate as constraints for some and barriers for others emerged in the qualitative data for both school music participants and nonparticipants. Students in both groups, in open-ended responses and interviews, were critical of various aspects of the existing teacher-directed, performance-oriented, and classical music-focused model. Overall, school music participants generally enjoyed the school music structure and suggested ideas that expanded school music to include other courses that perpetuated these structures by offering new ensembles. Nonparticipants, however, proposed new ideas for school music that were diametrically opposed to these ideals, as they desired student-centered school music built on their popular musical interests; peer and self-guided learning; student choice; and active, exploratory, and collaborative learning environments. Nonparticipants were more interested in what was not yet being offered, suggesting that school music at Oak Valley might be unknowingly perpetuating structures that were not attractive to students.

These results supported the argument for expanding school music programs beyond the traditional, performance-based model (Kratus, 2007; D.A. Williams, 2007, 2011; D. B. Williams, 2007, 2012). The qualitative data analysis in the present study supported the idea of incorporating popular music instruments and styles in school music (Clements, 2010; Green, 2002, 2008; Hebert, 2009; Snead, 2010). The instructional styles proposed by interview participants included peer and self-guided learning, active and collaborative classroom environments, and teachers serving in roles that facilitated student learning rather than guided it. These ideas constituted student-centered

pedagogical practices (Allsup, 2003; Clements, 2010; Green, 2002, 2008. O'Neill & McMahon, 2005; Scott, 2011; Shively, 2002) that departed from a teacher-directed model.

Several authors have advocated for culturally responsive pedagogical practices in music education (Abril, 2009; Albert, 2006; Fitzpatrick, 2012; Horne, 2007; Ladson-Billings, 1995a, 1995b; Shaw, 2012) that are intended to meet the needs of an increasingly diverse population of students in school. In our first meeting at Oak Valley High School, Mr. Mitchum shared his idea for starting a mariachi band, hoping that such an ensemble might attract more Hispanic students to the school music program. The qualitative data from the open-ended responses contained only two responses that mentioned musical courses connected to specific cultural traditions: mariachi band and dubstep. This does not suggest that students might not be interested; it may only indicate that they might not think of these types of musical activities as a potential school music courses. An alternate interpretation might be that students were more interested in learning about popular music than about music tied to their own cultural traditions.

Connecting individual qualitative cases to the quantitative data. The researcher devised a method of connecting the quantitative and qualitative results using the constraint items. During the interviews, the researcher presented five large cards on which the constraint items were listed by component from the principal components analysis (Figure 10). The researcher reminded the students that they had responded to these items on the survey, but that the survey items were now combined into meaningful groups. The researcher pointed out that the items listed on each card shared things in common with the others and provided a couple of minutes for the students to read the

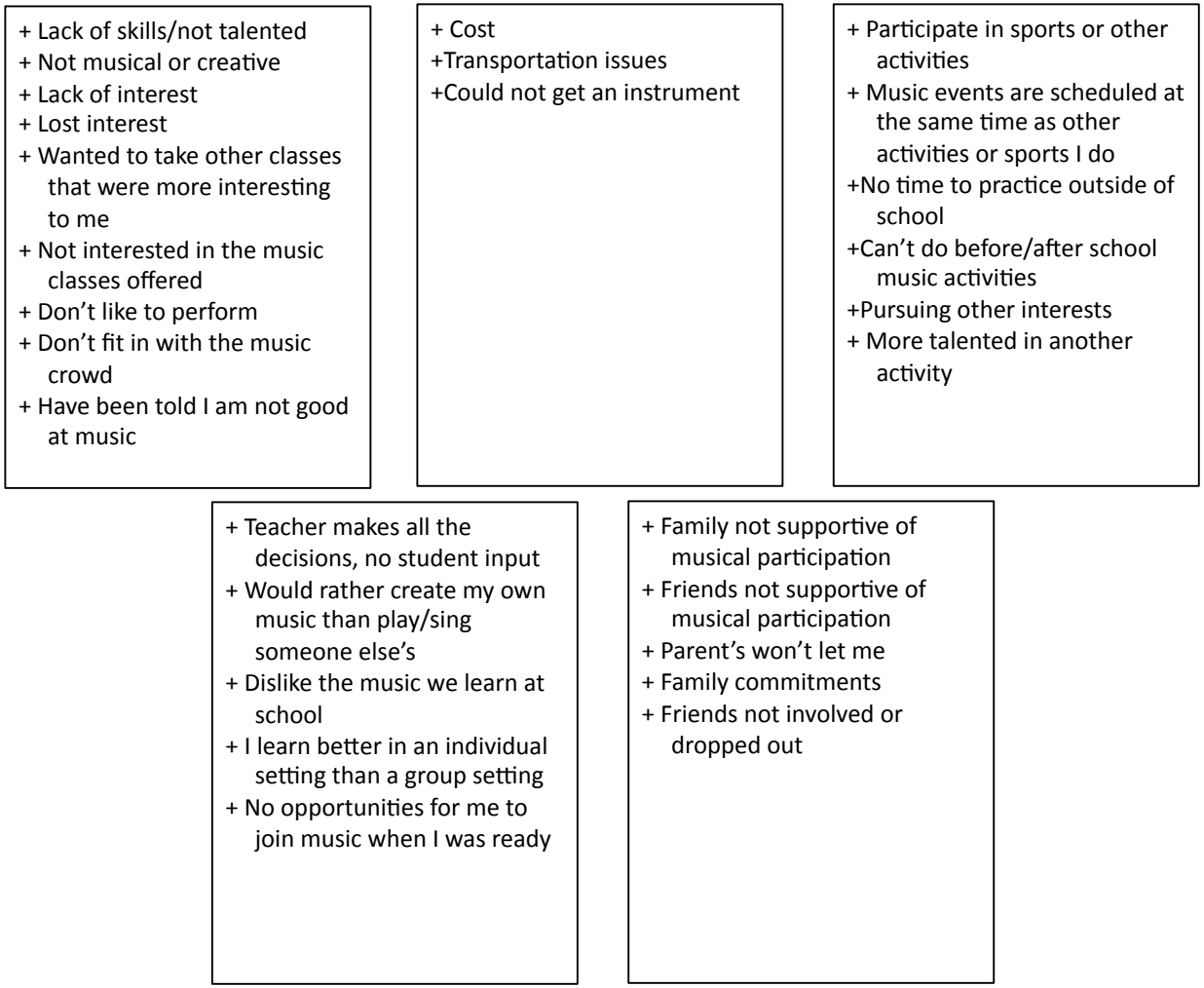

Figure 10. Example of barrier statement cards.

cards and alert the researcher when they had finished. The researcher asked each student to consider how much each group of items had served as a barrier to their own school music participation, and to order the cards from most influential to least influential upon the decision not to participate in school music. The researcher provided as much time as needed and encouraged students to experiment with the order until they had arranged them in the way that best represented their own experiences.

During this exercise, interview participants engaged in a variety of behaviors. Some students asked questions such as, "What if only some of these affect me but not others?" (field notes, April 6 & 7, 2015). Other students talked through their rationale as they ordered the cards, pointing out specific items that were particularly powerful or had no bearing on their decisions (field notes, April 7 & 8, 2015). Still other students reflected quietly, reordering the cards, paused for reflection, and moved the cards again (field notes, April 6 & 7, 2015). Once each student indicated that the task was finished and confirmed the order was set, the researcher asked each student to share how the various barriers influenced the decision not to participate in school music. The exercise prompted students to share other experiences with specific barriers they had not previously mentioned. In these cases, the barrier statements on the cards reminded students of other experiences with school music they also believed to be factors in their nonparticipation decisions.

In the quantitative survey, the researcher had asked students to respond to each constraint item on a Likert-type scale. The survey tool randomized the order of presentation for the 33 constraint items for each survey respondent. The researcher

summed the score for each scale, divided it by the total possible score value and ranked the proportions in descending order.

In connecting the quantitative and qualitative results, the researcher used data convergence labels to describe the relationships between the interview participants' ordering of the constraints. It was not expected that any of the rank orders would align exactly between the surveys and the interviews, due to the random presentation of the individual school music constraint items on the survey. The researcher compared the rank order of the school music constraint components between the quantitative and qualitative phases of the study. These comparisons were made in terms of the number of categories in which the rank order between study methods aligned with each other and the degree to which the categories diverged from each other. The researcher considered the degree of divergence as the difference between rank ordered positions in relation to each other. The researcher used the label *confirm* when three categories aligned in their rank order and the two divergent categories differed by one rank position. The researcher used the label *mixed* when three categories aligned and the two divergent categories differed by more than one rank position, or when only two categories aligned. When only one category aligned and there were more than two divergent categories that differed by more than two rank positions, the researcher used the label *contradict*. These results are displayed in Table 22.

The narrative interview data were consistent with the constraint order assigned by each participant, as would be expected since these occurred in the same meeting. It was also not surprising that the rank order of the constraint components were largely mixed between the survey and interview data, due to the difference in the presentation of the

Table 22

Comparison of Scale Scores and Interview Responses for School Music Constraints (Descending Rank Order) & Alignment

	Constraint components					
Name	Personal perceptions	Financial & transportation	Other activities	School music structures	Social support	Alignment
Ayeshia						
Scale score	3	2	1	5	4	Confirm
Interview order	2	3	1	5	4	
Carly						
Scale score	1	4 (tie)	2	3	4 (tie)	Mixed
Interview order	3	4 (tie)	2	1	4 (tie)	
Daniel						
Scale score	2	4 (tie)	1	3	4 (tie)	Mixed
Interview order	2	5	1	4	3	
Elena						
Scale score	4	1	3	2	5	Contradict
Interview order	2	3	4	1	5	
Ibsaa						
Scale score	1	5	2 (tie)	2 (tie)	4	Mixed
Interview order	5	4	2	3	1	
Ignacio						
Scale score	3	5	1 (tie)	1 (tie)	4	Mixed
Interview order	4	3	1	2	5	

Kahlil						
Scale score	5	3	2	1	4	Confirm
Interview order	5	3	1	2	4	
Nicole						
Scale score	1	4	3	2	5	Mixed
Interview order	1	4	5	2	3	
Olivia						
Scale score	5	2	1	4	3	Contradict
Interview order	4	3	1	5	2	
Sophie						
Scale score	2	5	1	4	3	Contradict
Interview order	3	5	4	2	1	
Thanh						
Scale score	3	1	2	4	5	Mixed
Interview order	1	3	4	2	5	
Trenton						
Scale score	3	4	2	1	5	Mixed
Interview order	4	5	2	1	3	

items. Considering each student interviewee independently, the relationship between the qualitative and quantitative data were as follows: two confirmed, seven mixed, and three contradicted. The confirmatory cases were Ayeshia and Kahlil, who each had two items that switched order in adjacent rank positions. The contradictory cases were Elena, Olivia, and Sophie. There were seven cases that were mixed: Carly, Daniel, Ibsaa, Ignacio, Nicole, Thanh, and Trenton. While Thanh only matched on two constraint categories, his differences were paired in adjacent categories, which suggested his results were more mixed in relation to the survey scores than contradictory.

All of the interview participants started the interview with a description of their experiences with school music and how their encounters with specific barriers influenced their choices not to participate. The constraint order exercise occurred midway through the interview, after they had talked about their personal experiences, which might explain why the constraint orders for these students were different from their survey responses, but consistent with the interview data. Another factor that might have contributed to these differences, as well as those for the mixed cases, was the grouping of the items. Several students asked how they should order the five constraint components when they felt as though only some of the items were important in their decisions not to participate in school music. In these instances, the researcher reminded students that some statements might not be as important to them, but suggested they consider the items as a group. The need to make judgments, rather than indicate a score on a Likert-type scale for each item, might have also accounted for the differences between the survey and the interview exercise.

Logistic Regression Model of School Music Participation and Nonparticipation

As mentioned in each of the sections above, the researcher constructed a multivariable logistic regression model to determine which of the factors examined in this study were significant predictors of school music participation. The final logistic regression model contained seven predictors, four of which were determined to be statistically significant: perceptions and attitudes toward school music, personal perception constraints, conflicting activity constraints, and school music structural constraints. Race/ethnicity, free or reduced lunch status, and musical task difficulty were not significant, but were important in the model and provided the necessary balance to the other variables.

The qualitative results included three themes related to the barriers students perceived to obstruct their music participation. The power of personal perceptions theme connected to the statistical results for personal perception constraints. The choice as a hierarchy of values theme connected to the statistical results regarding conflicting activity constraints. The school music as a closed system theme connected to the statistical results regarding school music structural constraints. The qualitative results enhanced the quantitative results by providing insights into how these constraints operated in the lived experiences of students in regard to participation in school music, as well as music outside of school.

The researcher established the connections of these results to the related literature in the previous sections. The quantitative results of the differences between group means revealed that personal perception constraints had the largest effect, followed by school music structural constraints, then conflicting activity constraints. These results suggested

that the intrapersonal constraints were the most powerful, which supported the results of (Alexandris et al., 2002; Gilbert & Hudson, 2000; Raymore et al., 1993; Samdahl & Jekubovich, 1997; Walker et al., 2007). Only two constraint categories, intrapersonal and structural, were significant predicators in school music participation and nonparticipation. Social support (intrapersonal) constraints were not significant, but the scale measuring perceptions and attitudes toward school music contained items related to the perceived support of parents, peers, and music teachers. Therefore, the influence of perceived support was present in the logistic regression model, though as a function of attitudes and not explicitly. This is also true for perceptions of ability and task values, which were identified as predictors of activity choice (Eccles et al., 1989; Eccles & Wigfield, 1995; Wigfield & Eccles, 2002; Wigfield et al., 1991) and musical participation (McPherson & Hendricks, 2010; McPherson & O'Neill, 2010; O'Neill et al., 2001; Yoon, 1997) in previous studies. Perceptions of abilities and values were present in items within personal perception constraints, so it would be inaccurate to suggest that these were not influential in predicting school music participation and nonparticipation.

However, the finding that competence beliefs and values were not significant in predicating school music participation and nonparticipation requires further discussion. One possible explanation is that these constructs were not significant when other factors were included in the model. As mentioned earlier, absorbing beliefs of competence and values within the constraint categories does not mean they were absent from the model entirely. Perhaps low evaluations of competence and values function as constraints or barriers to school music participation. If high evaluations of these factors result in facilitating participation in a particular activity, it is possible that low evaluations could

function to impede participation. The scale measuring perceptions of musical difficulty was the only expectancy-value scale included in the logistic regression model, and the only construct among those examined in the present study that was negatively related to school music participation. This result, combined with the presence of items related to evaluation of ability and values within personal perception constraints, supported the idea that of negative subjective evaluations regarding school music functioned as barriers to participation.

The significance of free or reduced lunch status, a socioceconomic indicator, as a predictor in school music participation and nonparticipation confirmed the results of other studies in constraint negotiation theory. Crawford et al. (1991) proposed that constraint experience may be related to a "hierarchy of social privilege" (p. 317) in which better educated and higher income individuals experienced fewer and weaker intrapersonal and interpersonal constraints than less privileged individuals. Searle and Jackson (1985) determined that barriers were unequally distributed and that economically disadvantaged individuals experienced the greatest barriers to activity participation. Hultsman (1992) reported that students at the lowest income levels had the strongest perceptions of barriers to activity involvement.

That three of the constraint items were significant predictors of participation and nonparticipation suggested a new and beneficial perspective from which to study school music nonparticipation. This was an exciting finding of this research, supporting the utility of constraint negotiation theory and the hierarchical model of leisure constraints (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993) in music education. As an initial investigation of constraint negotiation theory in music education,

this research presents a new approach through which we might build a greater understanding of the experiences of school music nonparticipants.

Summary of Quantitative and Qualitative Results

As recommended by Creswell and Plano-Clark (2011), the researcher used the full mixed methods data matrix to create a smaller joint display to summarize the quantitative and qualitative results. This joint display arranged the results from left to right in the chronological sequence in which the research progressed. The quantitative results regarding the predictors in the final logistic regression model appear on the left side of the matrix. In the next column, the researcher included brief descriptions of two interview subjects, focused on the demographic predictors in the model, whose responses explained the quantitative results. Next to these descriptions in the third column of the display are examples from the qualitative data. These examples are in the form of quotations from the interview transcripts, using the interview participants' own words to illustrate examples from their personal experiences that linked to the quantitative results. The final column contains the themes that emerged from the qualitative analysis as they connected to the quantitative results (Table 23).

Model of School Music Constraints

The results of the present study suggested that current school music programs presented a number of obstacles to students in terms of the timing of opportunities for engagement, the types of courses offered, the repertoire studied, and other aspects of the experience itself. Viewed through a constraint negotiation theoretical lens, school music participation might best be described as a process of navigating constraints to participation. In the process of sustained engagement, students encounter various

Table 23

Joint Display of Quantitative Results, Interview Participants, and Qualitative Data for Logistic Regression Model

Linking the Results of the Survey Regarding Perceived Barriers to School Music Participation and Music Nonparticipants' Interview Quotes Regarding Personal Experiences			
Quantitative Results	Interview Participants	Qualitative Data	Qualitative Themes
Race/ethnicity	Thanh, Asian, FRL	"My parents don't really know about…music program here."	No qualitative parallel
	Ibsaa, African American, FRL	"When you come to the United States, like really some obstacles…Pay my bill and everything."	
Free or reduced lunch status	Ignacio, Hispanic, FRL	"At one point when the teacher told us about the uniform…my mom…couldn't pay for it."	No qualitative parallel
	Ibsaa, African American, FRL	"I got to go to work and stay there every single day."	
Perceptions and attitudes toward school music	Trenton, White	"With [school] band…you can't be creative. There's not a lot of wiggle room for being who you are and what you want to be."	The power of personal perceptions
	Daniel, White	"High school, there's not that middle school class where it's just general music…you have something really specific."	
Perceived musical difficulty	Nicole, Hispanic, FRL	"I used to see band like a hobby, like, I like it. I want to do it. Now, it was more like you have to do it…It wasn't fun anymore."	The power of personal perceptions
	Carly, White	"There were a lot of better singer in the class, and just being in the class with them, I thought, 'Well,	

		they're better than me.'"	
Personal perception constraints	Sophie, Hispanic	"I looked at all of the band members in the percussion section and I was like, 'They're way better than I am.'"	The power of personal perceptions
	Kahlil, African American	"I'm not the talent. I'm not great, but I know I have a little bit of skills in music."	
Conflicting activity constraints	Ayeshia, Hispanic, FRL	"Both of them [grades] were D's…'Well, this class [band] is more of 'if I want to' and I kind of can't right now.' I dropped out of it."	Choice as a hierarchy of personal values
	Olivia, White	"I just didn't see the need to do something I hadn't been doing for my whole high school career, so I continued playing sports instead."	
School music structural constraints	Thanh, Asian, FRL	"I don't think there is time for a new kid to join. Learn from scratch."	School music as a closed system
	Elena, Hispanic, FRL	"I think they take it very seriously, so it's hard to get into it [band] a bit later than most students."	

Note: FRL = free or reduced lunch recipient

constraints at the personal, social, and environmental levels. As long as they possess the skills, support, or resources to maneuver around them, their participation continues. However, when a student perceives a constraint to be insurmountable, it becomes a barrier resulting in nonparticipation. This barrier could be a single, intense obstacle, or it could be the last of a long series of constraints the student is no longer willing to battle. With no strategies or no desire to move around the barrier, it becomes a catalyst; the moment when a student gives up and discontinues participation, most often, never to return.

As the researcher analyzed and interpreted the data collected for the present study, both numeric and textual, and considered the expectancy-value and constraint negotiation theories in which this study was grounded, the idea of a model of school music constraints began to emerge. The idea of school music as a closed system continually echoed in the open-ended survey responses and in the semi-structured interview transcripts. Students repeatedly referred to the fact that it was "too late" for them to join school music, that they "didn't have the chance" to participate, or that they did not feel as though they possessed the necessary talent. Several responses suggested that school music, particularly at the secondary level, was for people who already knew how to play instruments or sing.

For the researcher, these responses conjured the mental image of an interstate highway, upon which there was only one exit leading to participation in school music. If a student missed the single entry point, there was no other opportunity to get there, and there was no going back. The qualitative data were particularly salient in forming the idea that school music was a tightly bounded system, with limited access, and a narrow

selection of musical opportunities within the circumscribed repertoire selected by teachers. Students' suggestions on the survey for new music classes reinforced this idea as they imagined classes in which they could pursue music and instruments that were personally meaningful; had opportunities to begin singing and playing instruments whenever they were ready; and learned from the teachers, each other, and themselves.

The idea of school music as a closed system is not new. Several authors have argued for the reconceptualization of music education to meet the needs of more students within our schools (Allsup, 2003; Jorgensen, 2003; Reimer, 2003; Swanwick, 1999). What is new in the present context is the idea of constraints as part of the operational system of school music that unintentionally alters, limits, or obstructs musical participation.

Guided by the quantitative and qualitative results of this study and the expectancy/value and constraint negotiation theories, the researcher conceived a model of school music constraints (Figure 11). This model is based on the work of Crawford and his colleagues and their hierarchical model of leisure constraints (Crawford & Godbey, 1987; Crawford et al., 1991; Jackson et al., 1993). The model of school music constraints presents the manner in which perceived constraints and barriers function as an element of school music. Some students will move through their school musical participation unrestricted, while others will encounter constraints that will alter their participation in some way, though it will continue. Some students, however, will be denied entry because they face barriers they cannot overcome or will choose to leave school music when they encounter a constraint they do not have the resources, strategies, or desires to overcome.

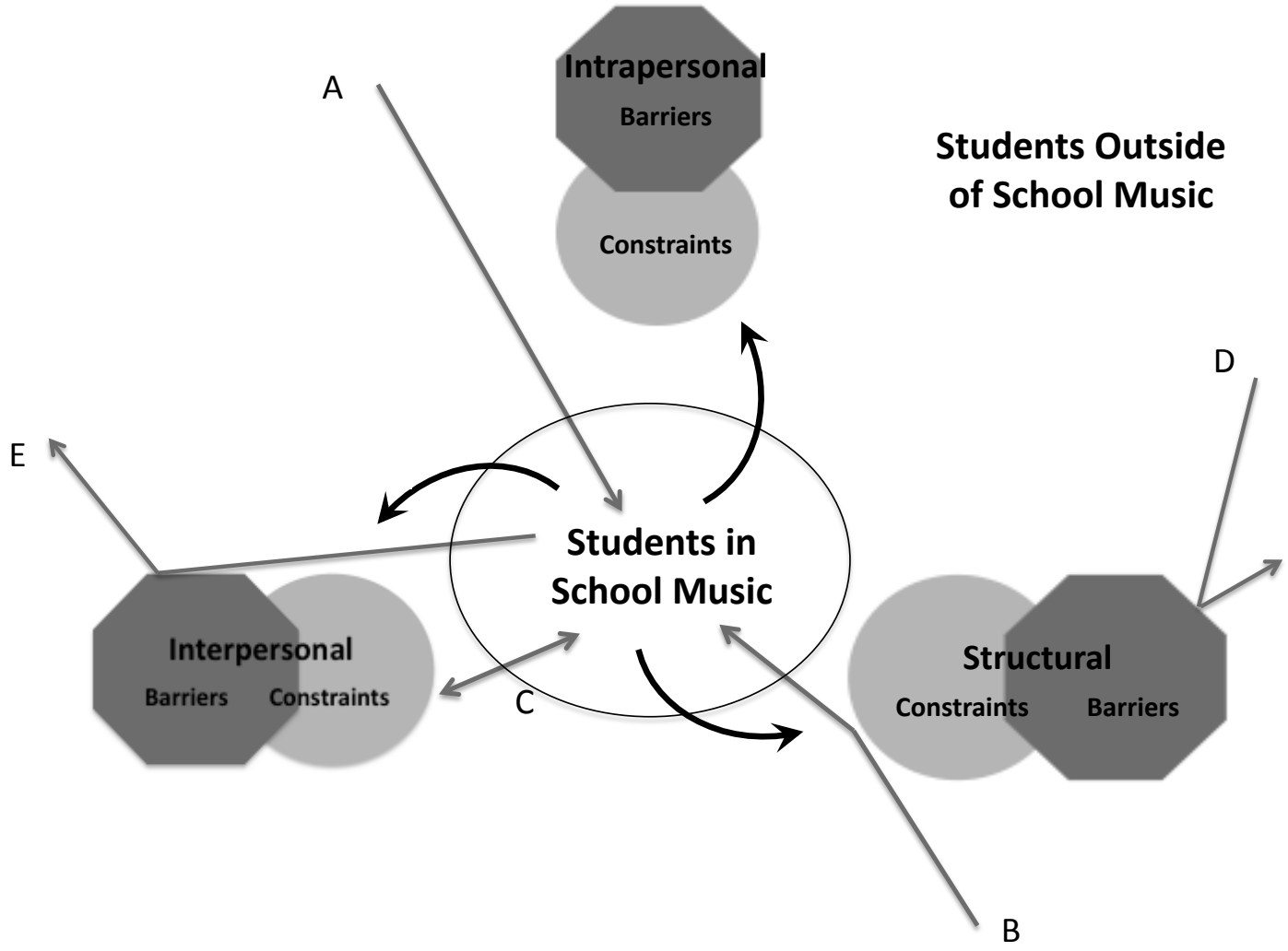

Figure 11. The model of school music constraints. School music as a closed system.

Students who do not participate in school music are located outside of the model. In the model, constraints at three levels (intrapersonal, interpersonal, and structural) exist on the boundaries of school music, which is located between participation (in the center of the model), and nonparticipation (outside of the perimeter of the model.) Two symbols, a circle and an octagon, represent the manner in which each of these obstacles might be perceived by individual students. The circles, on the interior of the model, represent constraints (i.e., navigable obstacles that can be overcome so that participation can continue). The octagons, on the outside of the model, represent barriers (i.e., obstacles that cannot be negotiated and result in nonparticipation). The arrows show the movement of students into and out of school music, which could occur at any point but – in the graphic representation of the model – are limited to one action of each type for simplicity in interpretation.

Some students engage in school music without experiencing constraints (A), making for unrestricted entry into the program, represented in the center of the model. Other students must move past perceived constraints (B) to enter into the music program. For example, a student who wants to participate may have to overcome a structural constraint, such as the financial cost of obtaining an instrument, to make this possible. Once students move past any initial constraints and engage in school music, they might encounter additional constraints throughout their participation, represented by the curved arrows between music students and constraints. As students experience constraints at various levels (represented by the circles along the interior of the boundaries) and negotiate them (C), they are able to continue their school music participation. At the point any of these constraints is perceived to be insurmountable (represented by the

octagonal shapes on the outside of the boundaries), they become barriers that cannot be overcome. Some school music nonparticipants, again on the outside of the circle, have strong perceptions of constraints to school music. These students (D) perceive a constraint to be so intense that it functions as a barrier, represented by the deflection arrow. As a result, they never join school music. For those who join school music and encounter barriers during their participation (E), this results in nonparticipation as students make the decision to discontinue their participation, moving outside of school music.

The model of school music constraints brings together the results of the present study into a model illustrating the interactions of students with constraints related to school music participation. This model is a departure from the linear arrangement proposed by Crawford et al. (1991) in which individuals experienced constraints in a hierarchical sequence. Analysis of the data from the present investigation suggested that individual constraint experiences vary as students encounter constraints at various levels. These constraint experiences may occur in any sequence, though not necessarily in the order presented by Crawford et al. A circular arrangement seemed to better represent this idea, allowing for interactions with different constraints at various times, which also allowed for variations in the intensity with which such constraints are experienced. Nearly two decades after the introduction of the model, Godbey et al. (2010) suggested that individuals might enter the constraint sequence at any point, writing, "Actually, the model is circular so that the starting point is where the individual or group is/are in their daily lives" (p. 124). The authors went on to explain how experiences with a strong structural constraint, for example, might eventually affect one's preference for a given

activity, which by definition would be an intrapersonal constraint. This explanation, therefore, did not change their proposed hierarchical, linear sequence, but served to explain how experiences with constraints of one type might be perceived as another.

Chapter Summary

This chapter connected the quantitative and qualitative data, using the qualitative data to explain the significant statistical results associated with the quantitative data. One of the strengths of this study was the use of both types of data to better comprehend the phenomena of school music nonparticipation. The quantitative data examined how students' attitudes toward, beliefs about, perceptions of, and values for music functioned as facilitators or impediments to school music experience; the researcher was also interested know how such factors facilitated or impeded participation in music outside of school. The qualitative data brought the voices of nonparticipants to this work to build a greater understanding of the ways in which lived experiences served to connect students' perceptions and values to their musical participation behaviors.

In addition to comparing differences between school music participants and nonparticipants, the researcher built a logistic regression model to determine which factors were predictors of participation or nonparticipation. The resulting model predicted both outcomes at a high and nearly equal rate with constraints figuring prominently among the predictors. These results suggested that viewing school music participation as a process of negotiating constraints might be a useful approach for future research investigating the topic of nonparticipation.

Based on the quantitative, qualitative, and mixed methods results, the researcher conceived a model of school music constraints. Due to the prominent role that

constraints played in both sets of data, it seemed plausible to propose a model in which various school music structures might serve as constraints in school music participation. For some students, these constraints function to temporarily obstruct participation, but for others, these structures serve as barriers that either prevent engagement or lead to disengagement from school music. These constraints may function to close the system of school music to the majority of students and to limit the number of students who are able to participate within the existing structures.

CHAPTER SEVEN: CONCLUSION

This chapter summarizes the current research investigation and presents conclusions based on the quantitative, qualitative, and mixed methods results. The chapter begins with a summary of the purpose, design, and results of the mixed methods study. This is followed by a discussion of the implications of this study for music education, particularly K-12 music programs. Finally, recommendations for future research are suggested to build upon these results.

Review of Purpose, Design, and Results

The purpose of this mixed methods study was to investigate the factors and barriers associated with students' decisions not to participate in the school music program. The experiences of students from underserved populations were a particular focus of interest in examining school music nonparticipation. This study used an explanatory sequential (Creswell & Plano-Clark, 2011) mixed methods design in which the researcher collected and analyzed quantitative and qualitative data separately. The researcher collected quantitative data through a researcher-designed survey and qualitative data through an instrumental collective case study (Creswell, 1998; Stake, 1995). The researcher connected these results in the mixed methods analysis, using the qualitative data to explain the quantitative results. The researcher examined motivations for school music enrollment using expectancy-value motivational theory (Eccles, 2005; Eccles et al., 1983; Eccles et al., 1989; Eccles et al., 1993; Eccles et al., 2005; Eccles & Wigfield, 1995; Wigfield & Eccles, 2002; Wigfield et al., 1991, 1997), and constraint negotiation theory (Crawford & Godbey, 1987; Crawford et al., 1991, Jackson et al., 1993).

Three sets of research questions guided this study. The quantitative research questions were:

1. What are the musical and non-musical characteristics of students who participate and those who do not participate in the secondary school music program?
2. How do nonparticipating students' perceptions of music inside and outside of school influence their participation in music activities?
3. What barriers and other factors contribute to student nonparticipation in secondary school music programs?

The qualitative research questions that guided the second phase of the study were:

1. What reasons do students give for not participating or discontinuing their participation in school music programs?
    a. How do perceived barriers and other factors affect students' decisions not to participate in school music programs?
2. What revisions to current secondary school music programs might engage a larger percentage of the student population?

The mixed methods research question was:

1. In what ways do students' reasons for nonparticipation in secondary school music programs provided in the qualitative interview data help to explain the quantitative results regarding nonparticipation reported in the surveys?

In the quantitative phase, the results of a logistic regression model revealed seven factors that were predictors of both school music participation and nonparticipation: race/ethnicity, free or reduced lunch status, perceptions and attitudes toward school music, musical task difficulty, personal perception, conflicting activity, and school music

constraints. The model predicted both school music participation and nonparticipation with a nearly equal, and high, level of accuracy. The qualitative results revealed five themes in the cross-case analysis: nonparticipant musicians, choice as a hierarchy of personal values, school music as a closed system, the power of personal perceptions, and a desire for student-centered pedagogy.

In the mixed methods analysis, the qualitative results confirmed the quantitative results regarding personal perceptions of musical ability and associated task difficulty, hierarchical values in activity choice behaviors, and school music structures as barriers to engagement and sustained participation in school music. The qualitative data enhanced the results of the quantitative data regarding the operation of prioritized activity values in allocating time and resources for those activities most desired. The qualitative data were mixed in their connection to the quantitative data regarding socioeconomic status, as some interview participants detailed how financial costs obstructed their participation, while others reported no financial barriers. The qualitative results were contradictory regarding perceptions and attitudes toward school music because most interview participants described positive perceptions of the school music program, in contrast to the negative perceptions reported in the survey responses.

The researcher approached this study from a pragmatic paradigmatic stance in which the goal was to identify solutions to the problem of nonparticipation in school music. In this worldview, the practical usage of knowledge is of primary importance (Morgan, 2007), leaving the decision regarding transferability of these results to the reader (Lincoln & Guba, 1985). In making these determinations, Lincoln and Guba place the responsibility on the researcher to "provide sufficient descriptive data to make such

similarity judgments possible" (p. 298). Toward this end, the present researcher provided detailed descriptions of the school context and individual cases, particularly in the qualitative analysis, to assist the reader in determining the transferability of these results to other contexts (Lincoln & Guba, 1985).

The researcher acknowledges the limitations associated with a single research site and one sample of study participants in the generalizability of the results to other contexts. Although the sample size was adequate for the logistic regression procedure (Vittinghoff & McCullough, 2007), the quantitative results cannot be generalized beyond Oak Valley High School. The researcher leaves the generalizability of the qualitative results to other school contexts to the reader, based on the information provided in this document.

Implications for Music Education

The idea of school music participation as a process of constraint negotiation (Jackson et al, 1993) presents a new perspective from which to consider the problem of school music nonparticipation. The results of this study revealed that experiences with constraints, particularly one's personal perceptions of ability and interest, involvement in other activities that hold greater personal value, and the existing structure of school music programs could be used to predict participation and nonparticipation with a high level of accuracy. The researcher chose to employ a mixed methods research design to capitalize on the strengths of each approach in building a better understanding of the phenomenon of student nonparticipation than could be achieved through either method alone. This study provided an opportunity for the researcher to explore the reasons students do not participate in elective school music and to give voice to the students whom music

education does not currently serve. Few studies have focused on the nonparticipant population, yet these students hold the best information to assist us in addressing the problem directly. Regarding the importance of bringing these voices to music education research, Pitts (2004) wrote, "Research in music education has been remarkably slow to value children's perspectives, tending to study the outcomes of their learning rather than how they experience the processes" (p. 238).

It is important for music educators to be cognizant of the language they use to describe school music nonparticipants. Throughout this project, the researcher encountered a number of terms to describe music participants and nonparticipants in ways that framed participation as being more valuable or positive than nonparticipation, including continuance, continuers, perseverance, persistence, retention, and sustain. Descriptions of nonparticipants and nonparticipation included dropout, ex-musician, discontinuance, discontinuers, cease, quit, attrition, mortality, and wastage. (Granted, the last two examples existed in literature that was more historic in nature.) The ways in which the interview participants used music was a fascinating discovery, and, despite the fact that they all participated in music at different levels outside of school, they were certainly *not* "non-musical" students. Their absence from music classrooms did not necessarily indicate a lack of musical interest or ability, but perhaps a lack of music courses they found to be interesting or valuable to an extent that would motivate them to navigate the associated constraints.

It is worth noting that the majority of high school music nonparticipants in American schools are actually former music students, having participated in elementary school music. The fact that these students have left school music makes a compelling

case for examining and addressing the unintended constraints that exist within school music programs. However, this is not the case for all students, as three interview participants shared they had limited or no exposure to music in school before they attended school in Tremont as secondary students. All of these students had some interest in music, but, because there were no opportunities for involvement, they believed that it was too late for them. These cases suggest a need for removing the barriers to school music through the expansion of programs to include opportunities for all students to be musical.

Several authors have argued for the need to expand school music programs to include a broader range of musical experiences that extend beyond the traditional ensemble model. Swanwick (1999) argued, "School and college music education can become a closed system that leaves behind, or gets left behind by, ideas and events in the wider world" (p. 128). Radocy (2001) criticized the competitive nature of school band programs that resulted in the production of "high-quality performances by a talented few at the expense of more comprehensive musical experiences for the majority of students" (pp. 122-123). The results of the present study suggested that school music programs can inadvertently become closed by the very processes through which it, and music teachers, operate. It is time to remove the barriers and open the system to make school music truly accessible for all students.

Reimer (2003) argued for music curricula that were "comprehensive, sequential, and balanced" (p. 296), and Campbell, Thompson, and Barrett (2010) added "relevant" to that list of descriptors. Jorgensen (2003) encouraged the transformation of music education to "ensure that every young person experiences music in ways that are relevant

to, and meaningful in, her or his particular reality" (p. 128). Reimer advocated for music education that "incorporates as many dimensions of musical value as it can, seeking extensiveness in its offerings and goals so that it can serve the widest possible spectrum of people's musical needs and interests" (p. 295).

The results of the present research suggested the need for music educators to examine the current structures of their school music program to identify those practices and systems that serve to limit or obstruct the engagement of a larger, and more diverse student population. Opening the system of school music requires a willingness to explore new directions, offer multiple entry points, and broaden the kinds of musical experiences available to students. This includes accepting that there are many ways to be musical beyond performance. However, these ideas are not a call for the death of the ensemble, which is a musical context that holds a tremendous amount of musical value for many students. Rather, it is a call for the interrogation of the existing structures of school music programs to identify those processes, content, instructional pedagogies, and repertoire choices that deter students from participating. Jorgensen (2003) advised an approach that honored respected traditions, but also sought new avenues:

> There is the ever-present danger of failing to recognize the value of traditional things, especially in a society preoccupied with change. And not only is the educational enterprise under way, but each participant and observer has a partial understanding of it, and one's ideas and actions have unintended consequences. The spaceship is in flight, and repairs music be undertaken in mid-voyage. (p. 9)

A variety of student-centered pedagogical practices (Allsup, 2003; O'Neill & McMahon, 2005; Scott, 2011; Shively, 2002) were expressed by many of the participants

in this study, who wanted to be actively involved in formal and informal (Clements, 2010Green, 2002, 2008) music learning experiences. Students want guidance from their music teachers, but they also desire the freedom to be independent learners and to learn from each other. They want their voices to be heard and their opinions valued and respected as part of a collaborative learning environment. Making these changes does not require large-scale change. It might begin in one music classroom, where a music teacher allows student participation in repertoire selection, facilitates a student critique of the ensemble performance, or roams the room to provide individual feedback as students learn a new passage in small groups. While there are numerous limitations to effecting institutional-level or even program-level changes in music education, it is possible for music teachers to serve as change agents in leading reform within their own classrooms (Campbell, Thompson, & Barrett, 2010).

Music teachers could also consider bridging the repertoire gap between "what music teachers consider musically valuable and what students and communities regard as such" (Reimer, 2003, p. 238). The majority of participants sampled for this study mentioned the need to diversify the repertoire studied in school to include a wider variety of genres and styles. It was surprising that the interview participants, when asked about the balance between teacher-and student-selected music, suggested that a combination might be best. These students recognized that some of what is popular is not school-appropriate and felt that it was important to enjoy music that was familiar but to also explore music that was not.

Swanwick (1999) proposed four principles through which music educators might open the closed system of formal music education: caring for music; caring for students,

their achievement, and their autonomy; working for musical expressiveness; and promoting fluency over literacy. Each of these are important in placing students at the center of music education, which is the focus of student-centered pedagogical approaches. The inclusion of such instructional practices could transform school music programs in ways that lead toward cultivating personally meaningful musical experiences for a greater proportion of the students in K-12 schools. Perhaps none of the principles suggested by Swanwick is as important as the cultivation of relationships that encourage and support of the musical endeavors of students. The influence of the music teacher is a powerful motivator in encouraging musical development, but it can also serve to discourage participation as the perception of the student becomes a powerful reality. As stated by Eccles et al. (1983), personal interpretations of external realities become the basis for conceptualizations regarding the ability and difficulty of various activities, which then influence choice behaviors. These individual, subjective evaluations become the basis upon which students make determinations regarding their engagement and continued participation with school music. For those students who choose to participate, their actual experiences in the school music program serve to reinforce or readjust these perceptions.

Recommendations for Future Research

A number of ideas for future research became apparent throughout the course of this study. In pursuing these studies, researchers are encouraged to consider a variety of methods of inquiry, including mixed methods, as necessary to answer the questions of interest. An intriguing and surprising finding in the quantitative analysis indicated that a number of school music participants reported high levels of constraint, but continued to

participate in school music. Investigations into this group would assist in learning how constraints function for these students; it would be particularly helpful to examine the strategies these students use to negotiate constraints that allow them to continue their participation. This study also revealed differences in perceived musical values among nonparticipants, revealing the necessity to create a new category of student (the "nonparticipant musicians") among the interview participants. These results suggest that there may be two groups of students within the nonparticipant group that merit further investigation. Another interesting comparison might also exist between those school music students that experience high levels of constraint, yet persist in their participation, and nonparticipant musicians who experience barriers to school music but are actively involved in music outside of school.

The presence of contradictory results between the quantitative and qualitative data suggests the presence of indirect effects untested in this study. Future research might include the consideration of indirect pathways to discover what factors intervene between positive self-evaluations of school music, strong beliefs in musical abilities, and associated music difficulty and nonparticipation in music at school. The present study found that perceptions of constraints to school music influence students' decisions regarding participation. The investigation of indirect effects could assist in aligning the expectancy-value and constraint negotiation theories with a more dynamic model of school music constraints. Such a model would be a valuable tool in learning more about students' experiences with school music, and could serve to guide the effective transformation of school music programs to meet the needs of more students.

There is a need for more research exploring school music nonparticipation using the constraint negotiation theoretical framework. The present study suggested that investigations of constraint experience might be useful in understanding and responding to the problem of school music nonparticipation. Further research could include studies in school music or specific ensembles (e.g., band, choir, or orchestra) and could include students of various grade levels. Of particular interest would be longitudinal work with full classes of students to explore how perceptions, beliefs, values, and constraints and barriers operate to restrict or obstruct musical participation over a period of years. This research might also include the perspectives of parents and teachers in addition to those of students. Kinney (2010) suggested that different factors predicted engagement and persistence, making the study of key transition points an interesting avenue for exploring constraint experiences. Such transition points might include the move from elementary to middle school, middle to high school, or from elementary music class to the entry point for beginning instrumental music.

Constraint negotiation theory could be useful in other areas of music education in examining the experiences of different groups. Studies of music education majors could highlight differences between those who persist in music education programs and those who decide to pursue other majors. Constraint negotiation could also be useful in examining teacher retention, particularly longitudinal work with early career teachers as they enter the profession. The present study included the perspectives of interview participants from underserved populations, but further investigation is needed into the experiences of students representing these populations.

There is also a need for more research on effective strategies for engaging larger and more diverse student populations in school music. Studies in schools with vibrant music programs could help to identify strategies, courses, programs, and instructional practices that are successful in engaging and retaining a larger and more diverse population of music students. This is not to suggest the existence of one universal solution that, when applied, could result in increased school music participation in all settings. Just as school music programs vary widely in the experiences they offer for students, so, too, does their efficacy. The ability to share best practices from those programs that successfully engage a large and diverse student population would provide an opportunity for music teachers to consider and evaluate new ideas for use in their own schools with their own students. Along these lines, research into student-centered teaching practices in music ensembles might also help to uncover new methods for more actively engaging students in their own learning.

The studies suggested above could utilize quantitative, qualitative, or mixed methods of inquiry. The choice of method should be based on the research question(s) of interest (Creswell & Plano Clark, 2011; Greene et al., 1989; Morgan, 1998), but the depth of understanding provided by using the qualitative data to explain the quantitative data in this study suggests that mixed methods designs may be particularly well suited to inquiry in music education. Music teaching and learning is a complex endeavor in which the use of multiple forms of data and multiple perspectives on the topic of interest may increase the depth of our knowledge and understanding in ways that could benefit music education. The use of mixed methods research in music education is still relatively new, (Bazan, 2011; Clementson, 2014; Fitzpatrick, 2011; Gerrity et al., 2013; Horne, 2007;

Whitaker, 2011). However, according to a search of the ProQuest Dissertations and Theses Database, the number of dissertations employing mixed methods designs has increased dramatically in the last five years, suggesting the growth of mixed methods designs in music education research.

Conclusion

Human behavior is complex. It cannot be assumed that any single set of variables can predict human behavior or that these variables function as discrete elements of the human experience, dissociated from any others. Measurements and statistical procedures reduce school music participation to a finite number of variables and, in the case of musical participation, a typically binary outcome. Constraint negotiation theory (Crawford & Godbey, 1987; Crawford et al., 1991, Jackson et al., 1993) allows for individual experiences to live among the data points, connecting perceptions, beliefs, and values. The use of a substantial qualitative component in the present study helped to bring these experiences to life in the students' own words, clarifying the meaning of the quantitative data analyses.

The primary importance of this research is in discovering a way to view school music participation that is not only statistically significant, but practically significant as well. The use of a mixed methods design assisted the researcher in creating a richer and more complete understanding of school music nonparticipation than could have been achieved through either the quantitative or qualitative method alone. The result is a detailed picture of nonparticipation that found students – both school music participants and nonparticipants – to be incredibly musical and insightful.

Throughout his professional life, Bennett Reimer was an important advocate for the reconceptualization of music education, expressing his strong desire to make musical experiences widely available to all. Therefore, as this document ends, it is appropriate to include an extended quote from one of his more recent publications:

> Music is thriving in America, in its rich array of types and styles and ways to be involved that our multimusical culture makes so readily available to all. Music *education* is not thriving comparably. We have tended to hunker down with our narrow preferences and limited opportunities and then, because we are dangerously irrelevant, we advocate, advocate, advocate – not for fundamental change in music education but for unquestioning support for what we have traditionally chosen to offer…. Our most urgent task, our way out of our unreality, is to more fully satisfy the actual musical needs and enthusiasms so plentiful all around us while adding to people's musical satisfactions the breadth and depth we are professionally qualified to help them achieve. (Reimer, 2004, p. 34)

Student-centered pedagogical practices focused on who we teach, what we teach, and how we teach may be one succinct solution to the problem of school music nonparticipation. To paraphrase Gouzouasis et al. (2008), we cannot assume that we know what our students think or want unless we ask. Music teachers are encouraged to make the changes that will invigorate their own programs by focusing on who we teach: listening to our students, interrogating our practices and structures, and reimagining music education to better meet the needs of a larger, more diverse population of students.

What we teach and how we teach must be valuable and navigable not only for those those students in our music classrooms, but for those we strive to serve musically in the future.

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APPENDIX A: SUPERINTENDENT APPROVAL LETTER

School District Information Redacted

October 14, 2014

Jennifer K. Hawkinson
18 East Big Sky Place
Sioux Falls, SD 57110

Dear Ms. Hawkinson,

Please accept my commitment, and that of the **School District Redacted** to your proposed research project: "A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music." This project aims to expand the knowledge base regarding students who choose not to participate in school music programs, particularly those from culturally and economically diverse populations. This research has the potential to answer questions regarding students' perceptions of obstacles to school music participation and how their experiences with these barriers influence their decisions not to enroll in such programs. Further, the results of this study may assist in determining how, and whether, school music programs might be effectively transformed to meet the needs of a wider population of students, including those currently underserved by school music.

In addition to the dissertation that you will write outlining the related literature, research process, and results, we look forward to a report of your results to the **School District Redacted** Administration at the completion of your project. The results of this research project will assist in building our understanding of the experiences of students in our district who choose not to participate in their school music program. This project is congruent with our school district's desire to provide opportunities for all students to develop their talents and skills, achieve academic excellence, and succeed in reaching their potential.

We hope that your proposal receives a favorable review and look forward to working with you on this project.

Sincerely,

Superintendent Signature Redacted

Superintendent of Schools

APPENDIX B: UNIVERSITY OF MINNESOTA IRB APPROVAL

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Human Research Protection Program
Office of the Vice President for Research

D528 Mayo Memorial Building
420 Delaware Street S.E.
MMC 820
Minneapolis, MN 55455

Office: 612-626-5654
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E-mail: irb@umn.edu or ibc@umn.edu
Website: http://research.umn.edu/subjects/

October 22, 2014

Jennifer K Hawkinson

RE: "A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music"
IRB Code Number: **1408P53128**

Dear Ms. Hawkinson

The Institutional Review Board (IRB) received your response to its stipulations. Since this information satisfies the federal criteria for approval at 45CFR46.111 and the requirements set by the IRB, final approval for the project is noted in our files. Upon receipt of this letter, you may begin your research.

IRB approval of this study includes the interview assent form, survey assent form, School Name Redacted consent form received October 21, 2014. The pilot study assent form and School Name Redacted consent form received October 22, 2014 are approved. Recruitment materials submitted August 19, 2014 are approved.

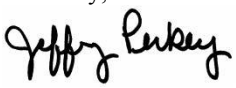
The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 1000 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

For your records and for grant certification purposes, the approval date for the referenced project is October 1, 2014 and the Assurance of Compliance number is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003). Research projects are subject to continuing review and renewal; approval will expire one year from that date. You will receive a report form two months before the expiration date. If you would like us to send certification of approval to a funding agency, please tell us the name and address of your contact person at the agency.

As Principal Investigator of this project, you are required by federal regulations to inform the IRB of any proposed changes in your research that will affect human subjects. Changes should not be initiated until written IRB approval is received. Unanticipated problems or serious unexpected adverse events should be reported to the IRB as they occur.

The IRB wishes you success with this research. If you have questions, please call the IRB office at 612-626-5654.

Sincerely,



Jeffery Perkey, MLS, CIP
Research Compliance Supervisor
JP/bw

CC: Scott Lipscomb

APPENDIX C: REVISED SURVEY INSTRUMENT

Note: The survey was conducted using the Qualtrics online survey tool available through the University of Minnesota. Comments in italics are included throughout this copy of the survey to indicate where skip logic and conditional branching were used based on the participant responses.

The first few items on this survey tell me a little bit about you and your background.

1. Name:

_____

Last Name First Name

2. Preferred Email Address

The researcher will only use this address to communicate with you about the study. Your email address will not be shared with any other individuals or organizations.

_____

3. Sex: (Check one box.)

☐ Female
☐ Male

4. How old are you? Please type age below:

_____

5. What grade are you in school this year? (Check one box.)

☐ Freshman (9th grade)
☐ Sophomore (10th grade)
☐ Junior (11th grade)
☐ Senior (12th grade)

6. What is your current high school grade point average (unweighted)? (Check one box.)

☐ 0 to 1.0
☐ 1.1 to 2.0
☐ 2.1 to 3.0
☐ 3.1 to 4.0

7. Please check one of the following that **best** describes your race: (Check one box.)

- ☐ African American/Black
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Hispanic or Latina/Latino
- ☐ Native Hawaiian or Pacific Islander
- ☐ White/Caucasian
- ☐ Multi-racial

  If participants choose the "Multi-racial" option, they will be directed to the following item:
  Please type in the racial groups with which you identify.

  _____

8. Is English your native language (the first language you learned to speak when you were a child)? (Check one box.)

- ☐ Yes → *Skips to question 14*
- ☐ No → *Goes to next question*

9. What is your native language (the first language you learned to speak when you were a child)? Please type your language below.

_____

10. How often do you speak your native language with your parents, guardians, or other family members and friends? (Check one box.)

- ☐ I never speak my native language with my family or friends; we only speak English.
- ☐ I speak very little in my native language with my family or friends; we speak mostly English.
- ☐ I speak equally in my native language and English with my family and friends.
- ☐ I speak very little English with my family or friends; we speak mostly in our native language.
- ☐ I only speak my native language with family and friends.

11. How well do you understand spoken English? (Check one box.)

- ☐ Very well
- ☐ Well
- ☐ Not well
- ☐ Not at all

12. How well do you speak English? (Check one box.)

- ☐ Very well
- ☐ Well
- ☐ Not well
- ☐ Not at all

13. How many **years** have you taken at least one class for English language learners at school?

_____

In the following questions, answer for the parent(s), guardian(s), or stepparent(s) you live with most of the time.

"Guardians" may include foster parents, legal guardians, or other older adults living in your household, such as grandparents, who are responsible for you.

14. Which parent(s)/guardian(s) do you live with most of the time?

- ☐ Both parent(s)/guardian(s)
- ☐ Just mother/female guardian
- ☐ Just father/male guardian
- ☐ Neither parent/guardian

15. Indicate your mother's/female guardian's/one parent's highest level of education (Check one box.)

- ☐ Did not finish high school
- ☐ Graduated from high school or equivalent (GED)
- ☐ Graduated from a two-year school (such as a vocational or technical school, junior college, or community college)
- ☐ Graduated from college
- ☐ Completed a Master's degree or equivalent
- ☐ Completed a Ph.D., M.D., or other advanced professional degree
- ☐ Don't know

16. Indicate your father's/male guardian's/other parent's highest level of education. (Check one box.)

- ☐ Did not finish high school
- ☐ Graduated from high school or equivalent (GED)
- ☐ Graduated from a two-year school (such as a vocational or technical school, junior college, or community college)

☐ Graduated from college
☐ Completed a Master's degree or equivalent
☐ Completed a Ph.D., M.D., or other advanced professional degree
☐ Don't know

17. Do you currently receive free or reduced school lunch? (Check one box.)

☐ Yes
☐ No

The questions below measure students' perceptions of music. While each of the questions use a 7-point Likert-type scale, the anchors for each question vary to fit the intent of the question.

Choose one response for each question below.

18. How useful is music compared to your other activities?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all useful						Very useful

19. How useful do you think learning music will be for you when you leave school and go to work?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all useful						Very useful

20. How useful is learning music for your daily life outside school?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all useful						Very useful

21. How good are you at music?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7

Not at all good						Very good

22. In general, how hard is music for you?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Very easy						Very hard

23. For each of the following statements, choose one response.
(Students will see the following 7-point Likert-type scale underneath each statement below.)

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

School music is fun.
I enjoy the music we learn in school.
Our school music program provides opportunities for everyone to make music.
My elementary music teacher encouraged me to try harder.
My middle school music teacher encouraged me to try harder.
My high school music teacher encouraged me to try harder.
My parents or guardians encourage me to be involved with music at school.
My parents or guardians believe learning music is important.
My friends encourage me to be involved with music at school.

24. Are you currently enrolled in any music classes at school? (Check one box.)

☐ Yes → *Goes to next question & then skips question 27*
☐ No → *Skips to question 27*

25. Which music classes are you taking this year? (Check all boxes that apply.)

☐ Concert Band
☐ Concert Percussion
☐ Symphonic Wind Ensemble
☐ Symphonic Percussion Ensemble
☐ Jazz Band
☐ Jazz Improvisation
☐ Concert Choir
☐ Chamber Choir

- ☐ Freshman Chorus
- ☐ Jazz Choir
- ☐ Varsity Choir
- ☐ Show Choir
- ☐ Orchestra
- ☐ Accelerated Strings
- ☐ Harmony I
- ☐ Harmony II
- ☐ History of American Popular Music
- ☐ Other (Please list all other music courses you take at school that were not included here. This **does not** include other musical activities that are part of a music class, like marching band, madrigal, solo contest, etc.)

26. How many hours each week do you spend participating in music in school? Please write number of hours below:

---

27. Do you participate in music at school in any way?
    - ☐ Yes. Please explain below.
    - ☐ No

All students EXCEPT those who answered "Freshman (9th Grade)" to question 5 "What grade are you in school this year?" will skip to question 22.

28. What music classes did you take in high school **before** this year? (Check all boxes that apply.)

- ☐ Concert Band
- ☐ Concert Percussion
- ☐ Symphonic Wind Ensemble
- ☐ Symphonic Percussion Ensemble
- ☐ Jazz Band
- ☐ Jazz Improvisation
- ☐ Concert Choir
- ☐ Chamber Choir
- ☐ Freshman Chorus
- ☐ Jazz Choir
- ☐ Varsity Choir
- ☐ Show Choir

- ☐ Orchestra
- ☐ Accelerated Strings
- ☐ Harmony I
- ☐ Harmony II
- ☐ History of American Popular Music
- ☐ Other (Please list all other music courses you take at school that were not included here. (This **does not** include other musical activities that are part of a music class, like marching band, madrigal, solo contest, etc.)
- ☐ None. I have not taken any music classes during high school.

29. What music classes did you take in elementary school? (Check all boxes that apply.)

- ☐ Elementary music
- ☐ Elementary choir (Vocal group meeting separate from the regular elementary music class)
- ☐ Beginning band
- ☐ Beginning orchestra/strings
- ☐ World drum ensemble
- ☐ Steel drum ensemble
- ☐ Other (Please list all other music courses you take in elementary school that were not included here.)

30. What music classes did you take in middle school? (Check all boxes that apply.)

- ☐ Band
- ☐ Jazz Band
- ☐ Choir
- ☐ Jazz Choir
- ☐ Show Choir
- ☐ Orchestra
- ☐ Music Tech
- ☐ Guitar Club
- ☐ Other (Please list all other music courses you took in middle school that were not included here.)
- ☐ None. I did not take any music classes during middle school.

31. Have you ever learned to play an instrument or sing **at school** with a music teacher (during the school day, before school, or after school)? (Check one box.)

- ☐ Yes → *Goes to next question*
- ☐ No → *Goes to question 27c.*

32. What instruments(s) have you learned to play **at school** with a music teacher (during the school day, before school, or after school)? (Check all boxes that apply.)

[Note: For each response selected from column 1, conditional branching will take participant to the question/responses in column 2, then to question/responses in column 3. If no responses from column 1 are selected, participants will proceed to question 33.]

Participant will see entire list in this column →	*For each response selected, participant will then be asked, "What grade were you in when you **started** playing this instrument or singing at school?" →*	*Participant will then be asked, "What grade were you in when you **stopped** playing this instrument or **singing at school**?"*
☐ Voice/singing	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still sing at school ☐ I still sing, but not at school
☐ Piano	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Flute	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Clarinet	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Oboe	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Bassoon	☐ Before Kindergarten	☐ Before Kindergarten

	☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Saxophone	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ French horn	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Trumpet	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Trombone	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Baritone/euphonium	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Tuba	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

		☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Drums (snare, bass, etc.)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Mallets (bells, xylo-phone, marimba, etc.)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Timpani	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Drum set	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Violin	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Viola	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school

☐ Cello	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ String bass (upright)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Electric bass	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Classical guitar	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Electric guitar	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school
☐ Other instruments (Please add all other instruments you learned to play **at school** that are not listed here.)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play at school ☐ I still play, but not at school

*Note: Conditional branching will take respondents to the following open-ended questions: *Respondents who answered, "Yes" to question 24, "Are you currently enrolled in any music classes at school?" will see question 33a below.*
Respondents who answer "No" to question 24, "Are you currently enrolled in any music classes at school?" and choose any item in question 32 (column 1), "What instruments(s) have you learned to play **at school with a music teacher (during the school day, before school, or after school)?" will see questions 33a and 33b below.*
**Respondents who answer, "No" to question 24, "Are you currently enrolled in any music classes at school?" and "No" to question 31, "Have you ever learned to play an instrument or sing at school with a music teacher (during the school day, before school, or after school)?" will see question 33c below.*

33a. I decided to start playing an instrument or singing in a group at school because…

33b. I decided to stop playing an instrument or singing in a group at school because…

33c. I decided not to play an instrument or sing in a group at school because…

Each of the questions below are paired with questions in the next section of the survey in order to compare values for learning music in school and learning music outside of school. While each of the questions use a 7-point Likert-type scale, the anchors for each question vary to fit the intent of the question.

Choose one response for each question below.

34. At school, how much do you like learning music?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not very much						Very much

35. In general, I find working on music at school…

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Very boring						Very interesting

36. I feel that being good at music in school is…

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all important						Very important

37. Is the amount of effort it would take you to do well in music at school worthwhile for you?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not very worthwhile						Very worthwhile

38. How important is it to learn music in school?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all important						Very important

39. How useful is what you learn or have learned in music at school?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all useful						Very useful

**Note: Conditional branching will take to students to different versions of the following questions. Students who answered "Yes" to question 24 "Are you currently enrolled in any music classes at school?" will answer questions phrased in present tense. Students who answered "No" to question 24 will answer questions phrased in past tense [wording indicated in brackets, preceded by the following statement:*

[For the following questions, please think about the last music class you took at school. Please answer the questions based on your views of your past musical experiences **in school**.]

40. How well do you think you will do in music this year?
[How well do you think you did in your last music class?]

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Very poorly						Very well

41. Compared to other students in your class, how well do you expect to do in music this year?

[Compared to other students in your last music class, how well did you do in music?]

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Much worse than other students						Much better than other students

42. If you were to order all of the students in your music class from best to worst, where would you put yourself in music?

[If you were to order all of the students in your last music class from best to worst, where would you have put yourself in music?]

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
The worst						The best

43. Compared to most other students in your class, how hard is music for you?

[Compared to most other students in your last music class, how hard was music for you?]

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Much easier						Much harder

44. Compared to most other school subjects that you take, how hard is music for you?

[Compared to most other school subjects that you take, when you took your last music class, how hard was music for you?]

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
My easiest course(s)						My hardest course(s)

*Note: Conditional branching will take respondents to the following open-ended questions: *Respondents who answered, "Yes" to question 24, "Are you currently enrolled in any music classes at school?" will see question 45a below.*
Respondents who answer "No" to question 24, "Are you currently enrolled in any music classes at school?" and choose any item in question 32 (column 1), "What instruments(s) have you learned to play **at school with a music teacher (during the school day, before school, or after school)?" will see questions 45a and 45 below.*
Respondents who answer, "No" to question 24, "Are you currently enrolled in any music classes at school?" and "No" to question 31, "Have you ever learned to play an instrument or sing **at school with a music teacher (during the school day, before school, or after school)?" will see question 45c below.*

45a. What factors led to your decision join the music program at school? Please include as many things as you can remember that were part of your decision to take music at school.

45b. What factors led to your decision to stop taking music classes at school? Please include as many things as you can remember that were part of your decision to stop taking music at school.

45c. What factors led to your decision not to join the music program at school? Please include as many things as you can remember that were part of your decision not to take music at school.

46. Have you ever learned to play an instrument or sing **outside of school** (at home, church, a music store, with friends, or somewhere else)? (Check one box.)

☐ Yes → *Goes to next question*
☐ No → *Skips to question 48*

47. What instrument(s) have you learned to play **outside of school** (at home, church, a music store, with friends, or somewhere else)? (Check all boxes that apply.)

[Note: For each response selected from column 1, conditional branching will take participant to the question/responses in column 2, then to question/responses in column 3. If no responses from column 1 are selected, participants will proceed to the next question.]

Participant will see entire list in this column →	*Participant will then be asked, "What grade were you in when you **started** playing this instrument or singing **outside of school**?" →*	*Participant will then be asked, "What grade were you in when you **stopped** playing this instrument or singing **outside of school**?"*

☐ Voice/singing	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still sing
☐ Piano	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Flute	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12☐ I still play
☐ Clarinet	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Oboe	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Bassoon	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Saxophone	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ French horn	☐ Before Kindergarten	☐ Before Kindergarten

	☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Trumpet	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Trombone	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Baritone/euphonium	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Tuba	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Drums (snare, bass, etc.)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Mallets (bells, xylo- phone, marimba, etc.)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Timpani	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

		☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Drum set	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Violin	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Viola	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Cello	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ String bass (upright)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Electric bass	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Classical guitar	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Electric guitar	☐ Before Kindergarten	☐ Before Kindergarten

	☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play
☐ Other instruments (Please add all other instruments you learned to play **outside of school** that are not listed here.)	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12	☐ Before Kindergarten ☐ Kindergarten ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ I still play

48. What musical activities do you participate in **outside of school**? (Check all that apply.)

- ☐ Church choir
- ☐ Church band (wind instruments)
- ☐ Church orchestra
- ☐ Church rock or contemporary worship band
- ☐ Community choir
- ☐ Community concert band
- ☐ Community jazz band
- ☐ Community orchestra
- ☐ Play an instrument for fun with friends
- ☐ Play an instrument for fun by myself
- ☐ Sing for fun by myself
- ☐ Sing for fun with friends
- ☐ Family music group
- ☐ Garage band with friends
- ☐ Mobile DJ (Plays pre-recorded music at an event)
- ☐ Hip hop or electronica style DJ (Creates music using electronics, turntables, etc.)
- ☐ Write songs/lyrics
- ☐ Create music (Using computer software, keyboards, etc.)
- ☐ Other (Please list all other music activities you participate in outside of school, including the style[s] of music you create or perform in these activities.)
- ☐ None. I do not participate in musical activities outside of school.

49. How many hours each week do you spend participating in music outside of school? Please write number of hours below:

**Note: Conditional branching for this question from response to question 24 "Are you currently enrolled in any music classes at school?" Only respondents who answered "No" will see question #50.*

50. Would you take a school music class if one were offered in the kind of music that interests you outside of school?

☐ Yes
☐ No

Each of the questions below are paired with questions in the previous section of the survey in order to compare values for learning music in school and learning music outside of school. While each of the questions use a 7-point Likert-type scale, the anchors for each question vary to fit the intent of the question.

Choose one response for each question below.

51. Outside of school, how much do you like learning music?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not very much						Very much

52. In general, I find working on music outside of school…

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Very boring						Very interesting

53. I feel that being good at music outside of school is…

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all important						Very important

54. Is the amount of effort it would take you to do well in music outside of school worthwhile for you?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not very worthwhile						Very worthwhile

55. How important is it to learn music outside of school?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all important						Very important

56. How useful is what you learn or have learned in music outside of school?

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Not at all useful						Very useful

**Note: Conditional branching for this question from response to question 24 "Are you currently enrolled in any music classes at school?" Respondents who answered, "Yes" will see question 57a below; "No" will see question 57b.*

57a. How much do you believe that each of the following has made your participation in school music challenging?

57b. How much do you believe that each of the following prevented you from participating in school music?

Respondents will see the statements from the three categories below randomly mixed together into one section, each with its own 7-point Likert-type scale as below.

☐	☐	☐	☐	☐	☐	☐
1	2	3	4	5	6	7
Never a problem						Always a problem

Intrapersonal
Cost
Transportation issues
Lack of skills/not talented
Lack of interest

Not musical or creative
Don't like to perform
Pursuing other interests
More talented in another activity
No time to practice outside of school
Can't do before/after school music activities
Lost interest

Interpersonal
Don't like the school music teacher
Parents won't let me
Friends not involved or dropped out
Family commitments
Work commitments
Don't know anyone else in music
Don't fit in with the music crowd
Participate in sports or other activities
Family not supportive of musical participation
Friends not supportive of musical participation
Not a cool activity to be in

Structural
Wanted to take other classes that were more interesting to me
Needed to take other classes to graduate
Have been told that I am not good at music
No opportunities for me to join music when I was ready
Music events are scheduled at the same time as other activities or sports I do
Could not get an instrument
Not interested in the music classes offered
Dislike music we learn at school
I learn better in an individual setting than a group setting
Teacher makes all the decisions, no student input
Would rather create my own music than play/sing someone else's

**Conditional branching for this question from response to question 24 "Are you currently enrolled in any music classes at school?" Respondents who answered, "Yes" will see question 55a below; "No" will see question 55b.*

58a. If you have experienced any obstacles to your participation in school music, how did you overcome them so you could take music?

58b. What other things prevented you from participating in the school music program that were not included in this survey?

59. Imagine your school is going to add new music classes based on what students are interested in taking. What class or classes would you suggest?

60. Why do you think some students choose not to participate in music at your school?

61. What would the school or music teachers need to do to encourage more people to participate in the music program?

APPENDIX D: COVER LETTER - PILOT

December 10, 2014

Dear Parent/Guardian,

My name is Jennifer Hawkinson and I am a music education doctoral student at the University of Minnesota. I am sending this letter to invite your son or daughter to participate in a research project I am conducting at Shady Hills High School. Because your student is under the age of 18 years, I am writing to ask you to consider allowing your child to participate in this study. All of the activities of this project will take place at Shady Hills High School and will require only one to two hours of your child's time.

The purpose of this study is to investigate the factors that lead to students' decisions to enroll or not enroll in music at school and the barriers that high school students encounter along the way. The enclosed consent form provides a summary of the project and tells you about what students that join the study will be asked to do.

Your school district and my university require parent or guardian permission before students can participate in any research project. Participation in this study is voluntary and students may choose to discontinue their involvement at any time. There is no penalty if you decide not to allow your child to participate in the study.

I hope that you will consider allowing your child to participate in this research. I take my responsibilities for protecting the confidentiality of all the students who participate in the study very seriously. Little is known about the factors and barriers that contribute to students' decisions to enroll in music at school and I am very excited to learn more about your child's experiences. I especially look forward to learning from the students of Shady Hills High School.

Thank you for considering this request and best wishes for a great school year!

Sincerely,

Jennifer K. Hawkinson
Ph.D. Candidate, Music Education
University of Minnesota – Twin Cities

APPENDIX E: PARENTAL CONSENT FORM – PILOT

CONSENT FORM

A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music

You are invited to participate in a pilot test of a survey for a study about the reasons why students participate or do not participate in high school music classes. You were selected as a possible participant because you are a student at Shady Hills High School. Please read this form and ask any questions you may have before agreeing to be in the pilot test.

This study is being conducted by:
Jennifer K. Hawkinson, Music Education Department, University of Minnesota – Twin Cities

Background Information

The purpose of this study is: to identify the factors and barriers associated with student nonparticipation in high school music programs by comparing the experiences of students who participate in music at school to the experiences of those who do not. The pilot test allows the researcher to test the survey, identify any potential problems, and make revisions before it is used in the actual study.

Procedures

If you agree to participate in this pilot test, I would ask you to do the following things:

- All students in this pilot test will fill out a secure online survey to tell me about themselves, their views about music, and the experiences that led to your decision to participate or not participate in school music classes. The survey will be completed at school and will take approximately one hour.
- Following the survey, you will be asked a series of questions to determine designed to learn about your experience taking the survey and how the survey might be improved.

Risks and Benefits of being in the Study

There are minimal risks associated with participation in this study.

- Students will be asked questions on the survey that they may feel uncomfortable answering or that they believe involve sensitive information. The researcher has limited these items and worded them carefully to minimize uneasiness for the participants. Responses will be kept confidential by the researcher. Students will be reminded at the beginning of the survey that their participation in the study is voluntary and they may choose not to answer a question or discontinue the survey at any time.
- Student names will be collected on the surveys, but the names will be transformed into codes by the researcher so that names are not directly linked to any student's responses. Only the researcher will have access to these codes, which will be kept in a secure electronic file.

- Students will be provided as much time as necessary to answer the questions on the survey and can ask the researcher any questions they might have as they respond to the survey items.

There are no direct benefits to the student for participating in this study. I hope that the results of this study will help school music teachers and administrators better understand the experiences and needs of students not currently participating in their high school music program and provide information that can be used to improve these programs.

Compensation: There is no compensation for participation in this study.

Confidentiality:
The records of this study will be kept private. In any sort of report I might publish, I will not include any information from the pilot study. Research records will be stored securely and only the researcher will have access to the records. Study data will be encrypted according to current University policy for protection of confidentiality.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your relationship with your high school and will not affect your grades. In addition, your decision whether or not to participate will not affect will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The researcher conducting this study is: Jennifer K. Hawkinson. If you have any questions, **you are encouraged** to contact her by phone at 605-941-0344 or by email at hawki426@umn.edu. You may also contact the University of Minnesota faculty advisor for this study, Dr. Scott D. Lipscomb, at 612-624-2843 or lipscomb@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

Please find an additional copy of this information enclosed to keep for your records.

Statement of Consent:
I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature of Student:_____Date: _____

Signature of Parent or Guardian:_____Date: _____
(If minors are involved)

Signature of Investigator:_____Date: _____

APPENDIX F: STUDENT ASSENT – PILOT

STUDENT ASSENT – PILOT STUDY

Hello! My name is Jennifer Hawkinson and I am a graduate student at the University of Minnesota. I interested to find out what factors are involved in the decision to participate or not participate in music courses at school. Everyone has their own reasons for taking music courses (or not) and each person's individual experiences with music inside and outside of school are different from the experiences of others.

If you agree to be in this pilot study, you will be asked to complete a survey. You will answer questions about what you think about music, what factors went into your decision to participate or not participate in school music, and what obstacles you have faced. Some items on the survey will provide a list of answers where you will choose a response. On a few survey items, you will write an answer to tell me about your views and experiences. Once you have finished taking the survey, you will be asked to share your opinions on various aspects of the survey so that I can improve it before I use it with another group of students.

Participating in this study is totally up to you, and no one will be upset with you if you don't want to do it. Your decision to participate or not participate will not affect your relationship with your high school and will not affect your grades. If you agree to be in the study and change your mind later, that is fine. You can ask any questions that you have about this study. If you have a question later that you didn't think of now, you can ask me at that time.

Choose one of the boxes below indicating your decision to be in this study or not. Remember that being in this study is up to you and no one will be upset with you if you don't want to participate or if you change your mind later.

☐ **I am willing to be in the study.** I have read the above statement or had it read to me and all of my questions have been answered. After I check this box, I will be directed to the survey. Thank you in advance for sharing your thoughts on this topic.

☐ **I don't want to be in this study.** I have read the statement above or had it read to me and all of my questions have been answered. After I check this box, I will be directed to a screen to end this session. Thank you for considering participation in this study.

APPENDIX G: COVER LETTER - PILOT

December 10, 2014

Dear Parent/Guardian,

My name is Jennifer Hawkinson and I am a music education doctoral student at the University of Minnesota. I am sending this letter to invite your son or daughter to participate in a research project I am conducting at Oak Valley High School. Because your student is under the age of 18 years, I am writing to ask you to consider allowing your child to participate in this study. All of the activities of this project will take place at Oak Valley High School and will require only one to two hours of your child's time.

The purpose of this study is to investigate the factors that lead to students' decisions to enroll or not enroll in music at school and the barriers that high school students encounter along the way. The enclosed consent form provides a summary of the project and tells you about what students that join the study will be asked to do.

Your school district and my university require parent or guardian permission before students can participate in any research project. Participation in this study is voluntary and students may choose to discontinue their involvement at any time. There is no penalty if you decide not to allow your child to participate in the study.

I hope that you will consider allowing your child to participate in this research. I take my responsibilities for protecting the confidentiality of all the students who participate in the study very seriously. Little is known about the factors and barriers that contribute to students' decisions to enroll in music at school and I am very excited to learn more about your child's experiences. I especially look forward to learning from the students of Oak Valley High School.

Thank you for considering this request and best wishes for a great school year!

Sincerely,

Jennifer K. Hawkinson
Ph.D. Candidate, Music Education
University of Minnesota – Twin Cities

APPENDIX H: PARENTAL CONSENT – MAIN STUDY

CONSENT FORM

A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music

You are invited to participate in a research study about the reasons why students participate or do not participate in high school music classes. You were selected as a possible participant because you are a student at Oak Valley High School. Please read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Jennifer K. Hawkinson, Music Education Department, University of Minnesota – Twin Cities

Background Information

The purpose of this study is: to identify the factors and barriers associated with student nonparticipation in high school music programs by comparing the experiences of students who participate in music at school to the experiences of those who do not.

Procedures

If you agree to participate in this study, I would ask you to do the following things:

- All student in this study will fill out a secure online survey to tell me about themselves, their views about music, and the experiences that led to their decisions to participate or not participate in school music classes. The survey will be completed at school and will take approximately 50 minutes.
- A few students who do not participate in music at school will also be asked to participate in an interview with the researcher at a later date to share more detailed information about their experiences and decision not to take music courses. The interviews will take place at school and the researcher will audio record the interviews for later transcription (type out everything that was said).
- The interview students will be sent the typed transcription of the interview to check for accuracy and make sure that it reflects the conversation with the researcher.

Risks and Benefits of being in the Study

There are minimal risks associated with participation in this study.

- Students will be asked questions on the survey that they may feel uncomfortable answering or that they believe involve sensitive information. The researcher has limited these items and worded them carefully to minimize uneasiness for the participants. Responses will be kept confidential by the researcher. Students will be reminded at the beginning of the survey that their participation in the study is voluntary and they may choose not to answer a question or discontinue the survey at any time.
- Student names will be collected on the surveys, but the names will be transformed into codes by the researcher so that names are not directly linked with any student's responses. Only the researcher will have access to these codes, which

will be kept in a secure electronic file. Oral and written reports will not include the names of any students that participate in the study or identifying information that would connect the data to any individual participant.

- Students will be provided as much time as necessary to answer the questions on the survey and can ask the researcher any questions they might have as they respond to the survey items.
- Students selected for the interview may be slightly nervous to talk to the researcher, but every effort will be made to help the student to feel comfortable answering questions about their experiences with music. Students will be reminded at the beginning of the interview that their participation is voluntary and that they may choose not to answer any question at any time or may stop the interview if they wish.

There are no direct benefits to the student for participating in this study. I hope that the results of this study will help school music teachers and administrators better understand the experiences and needs of students not currently participating in their high school music program and will provide information that can be used to improve these programs.

Compensation: There is no compensation for participation in this study.

Confidentiality:
The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. Study data will be encrypted according to current University policy for protection of confidentiality. Student interviews will be audio recorded and only the researcher will have access to these recordings. Audio recordings will be erased after they have been transcribed. Any data from these recordings in oral and written reports will not include any information that will make it possible to identify a participant.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your relationship with your high school and will not affect your grades. In addition, your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The researcher conducting this study is: Jennifer K. Hawkinson. If you have any questions, **you are encouraged** to contact her by phone at 605-941-0344 or by email at hawki426@umn.edu. You may also contact the University of Minnesota faculty advisor for this study, Dr. Scott D. Lipscomb, at 612-624-2843 or lipscomb@umn.edu .

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research

Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

Please find an additional copy of this information enclosed to keep for your records.

Statement of Consent:
I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Student Name (Please print)_____

Signature of Student:_____Date: _____

Signature of Parent or Guardian:_____Date: _____
(If minors are involved)

Signature of Investigator:_____Date: _____

APPENDIX I – PARENTAL PASSIVE CONSENT – MAIN STUDY

January 23, 2015

Dear Parent/Guardian,

My name is Jennifer Hawkinson and I am a music education doctoral student at the University of Minnesota. Your son or daughter has been randomly selected to participate in a survey for a research project I am conducting at Oak Valley High School. The purpose of this study is to investigate the factors that lead to students' decisions to enroll or not enroll in music at school and the barriers that high school students encounter along the way. The survey will take approximately 20 to 25 minutes and will take place during the school day.

Participation in this study is voluntary and students may choose to discontinue their involvement at any time. There is no penalty if you decide not to allow your child to participate in the survey. Your school district and my university require that parents or guardians who **do not** want their child to participate in the survey sign and return this letter.

I hope that you will consider allowing your child to participate in this research. I take my responsibilities for protecting the confidentiality of all the students who participate in the survey very seriously. Little is known about the factors and barriers that contribute to students' decisions to enroll in music at school and I am very excited to learn more about your child's experiences. I especially look forward to learning from the students of Oak Valley High School.

Thank you for considering this request and best wishes for a great school year!

Sincerely,

Jennifer K. Hawkinson
Ph.D. Candidate, Music Education
University of Minnesota – Twin Cities

I **do not** give my permission for my child to take the survey.

Student Name (Please print) _____

Parent or Guardian Signature_____

Date _____

APPENDIX J: STUDENT ASSENT – MAIN STUDY

STUDENT ASSENT – SURVEY

I want to find out what factors go into a students' decision to participate or not participate in music courses at school. Everyone has their own reasons for taking music courses and their individual experiences with music inside and outside of school are different from those of others.

If you agree to be in this study, you will be asked to fill out a survey. You will answer questions about what you think about music, what factors went into your decisions to participate or not participate in school music, and what obstacles you have met along the way. Some items on the survey will provide a list of answers where you will choose a response. There will also be a few questions where you will write an answer to tell us about your views and experiences.

Being in this study is totally up to you, and no one will be upset with you if you don't want to do it. Your decision to participate or not participate will not affect your relationship with your high school and will not affect your grades. If you agree to be in the study and change your mind later, that is fine. You can ask any questions that you have about this study. If you have a question later that you didn't think of now, you can ask me at that time.

Choose one of the boxes below indicating your decision to be in this study or not. Remember that being in this study is up to you and no one will be upset with you if you don't want to participate or if you change your mind later.

☐ **I am willing to be in the study.** I have read the above statement or had it read to me and any questions have been answered. After I check this box, I will be directed to the survey. Thank you in advance for sharing your thoughts on this topic.

☐ **I don't want to be in this study.** I have read the statement above or had it read to me and any questions have been answered. After I check this box, I will be directed to a screen to end this session. Thank you for thinking about being involved in this study.

APPENDIX K: PILOT SURVEY EVALUATION FORM

Survey Pilot Test Questions **PRINT NAME:**

Now that you have taken the survey, please answer the following questions based on your experience taking it. Circle Yes or No and write in additional information as directed for each question below.

1. Were the instructions for completing the survey written clearly?
   Yes No – If not, what was confusing?

2. Were the questions easy to understand?
   Yes No – Which questions were hard to understand?

3. Did you understand how to respond to the questions and statements?
   Yes No – For which questions was it confusing to know how to answer?

4. Was there any time when you felt the choices were too much alike to give just one response?
   Yes – For which questions did you find it difficult to choose just one because they were too much alike?
   No

5. Were there any questions or statements that did not have a choice that represented how you wanted to answer?
   Yes – Which questions did not have the answer you wanted?
   No

6. Was it easy to take the survey on the computer?
   Yes No – What was difficult about taking the survey on the computer?

7. Was it easy to change your answer to a question if you needed to do so?
   Yes No – When was it difficult for you to change your answer?

8. Did you feel like your privacy was respected and protected when you took the survey?

Yes No – What made you feel like your privacy was not respected or protected during the survey?

9. Do you have any suggestions about questions that should be added to the survey?

Yes – List anything you think I should ask.

No

10. Do you have any suggestions about questions that should be removed from the survey?

Yes – List anything you think I should remove form the survey.

No

11. Do you have any suggestions for making the instructions more clear?

Yes – List anything that would make the instructions clearer.

No

12. Do you have suggestions for improving the survey format (how it looks on the screen)?

Yes – List anything that would make the survey look better.

No

13. Please use the space below to make additional comments or suggestions about the survey, its questions or statements, or the process of taking it.

APPENDIX L: PILOT TEST RESULTS

Demographic Characteristics

In order to compare the music participants and nonparticipants at the pilot site, the researcher conducted a Pearson's Chi-square Test of Independence using the demographic variables. This procedure also allowed for the direct comparison of the results at the school level with those from the national demographics reported in previous research. The researcher used the Yates' Correction for Continuity values for all 2-by-2 tables, and Pearson's Chi-square values for all other tables. The significance level was set at .05 for all analyses. Because the majority of respondents answered every survey item, the researcher included all cases in the analysis, only excluding cases when the necessary data for the analysis was missing.

A Chi-square test for independence (with *Yates Continuity Correction*) indicated no significant relationship between music participation and sex, χ^2 (1, n = 53) =.06, p = .80, *phi* = .08; or free or reduced lunch status, χ^2 (1, n = 53) =.00, p = 1, *phi* = -.02. Because the familial structure variable contained small counts in some categories, the researcher collapsed the variable into two groups: students living with two parents and students living with one or neither parent or guardian. There was also no significant relationship between music participation and familial structure, χ^2 (1, n = 53) = 3.03, p = .08, *phi* = .28.

Due to the small data set for the pilot, assumptions for the minimum expected cell frequency were not reached for the variables native language, grade point average, parental educational attainment, and race/ethnicity, so the results should be interpreted with caution. For each of these variables, the researcher collapsed the number of

categories for each variable to a smaller number, due to the small counts for some variables. However, one cell remained in violation for each variable with the exception of parental educational attainment, where three cells did not meet the expected count of five. A Chi-square test for independence (with *Yates Continuity Correction*) revealed no significant relationship between music participation and native language, χ^2 (1, n = 53) = .00, p = 1, *phi* = -.02. The researcher also collapsed grade point average into two groups: 0 to 3.0 and 3.1 to 4.0. The results revealed there was no significant relationship between music participation and grade point average, χ^2 (1, n = 52) = 1.18, p = .28, *phi* = -.20. For parent/guardian educational attainment, the researcher used the highest educational attainment reported between parents/guardians in each case. The researcher collapsed the educational attainment variable from seven to four categories: did not graduate finish high school/do not know, graduated high school, graduated two year college, and graduated college/completed Master's or doctoral degree. The Pearson's Chi-square indicated no significant relationship between music participation and parental educational attainment, χ^2 (3, n = 53) = 3.49, p = .32, *phi* = .26. The researcher reduced the number of categories for race/ethnicity to three groups: White/Caucasian; Hispanic/Latino(a); and American Indian or Alaskan native, Asian, Black/African American, native Hawaiian or Pacific Islander, and multi-racial. Again, there was no significant relationship between music participation and race/ethnicity, χ^2 (2, n = 53) = .22, p = .89, *phi* = .07.

While the results of these analyses did not reveal significant relationships between any of the demographic variables and music participation, there were many instances where the expected cell count was not met. The larger sample size for the main study allowed an opportunity to explore these relationships and compare the results with

previous music participation research. However, as experienced in the data described above, it may be necessary to collapse the number of categorical variables based on the data.

Involvement in Music

Most of the survey respondents (64%) were enrolled in a music course at Shady Hills High School, with 34% reporting that they did not participate in a school music class and 2% participating in music at school, but not in a music class. This last respondent wrote, "I sing the national anthem at school sports events throughtout [*sic*] the school year. If im [*sic*] asked about it." Music students (n = 35) indicated all music courses they were taking during the current school year, with 87% singing in choirs, 72% playing in band ensembles, 17% in orchestral groups, and 14% indicating other music courses not listed, such as marching band. No students reported taking the music theory or history of popular music courses offered at the school.

Survey respondents answered questions about their previous school music experiences. Students could choose multiple responses to these items to indicate all of the ways in which they had previously participated in school music. Of respondents, 75% percent indicated they had taken elementary music, 42% played in elementary band, 40% sang in elementary choir, 28% played in orchestra, 2% played in a steel drum ensemble, and 2% indicated other music classes not specified. Among pilot participants, 9% reported that they did not take any music classes in elementary school. At the middle school level (i.e., grades six through eight), 8% of students reported they did not participate in school music, while 89% enrolled in choirs, 66% in band, 19% in orchestra, 32% in music technology, and 4% in guitar. Prior to the current school year, 20% of

students reported that they had not enrolled in any music courses in high school, while other respondents indicated they had previously taken band (76%), choir (23%), orchestra (24%), music theory (7%), and history of popular music (7%). Again, 13% of students reported other music classes in which they participated that were not included in the survey, the majority of whom added marching band. However, these additional items listed by respondents were musical activities offered to students as part of curricular courses, not classes for which they could register and receive credit.

The majority of students (75%) reported learning to play an instrument or sing from a music teacher, with 25% indicating that they had not. Students (n = 40) reported all instruments and voice they learned at school with a music teacher, including 36 wind instruments, 21 vocalists, 18 percussion instruments, 18 orchestra instruments, 10 guitar, and 9 piano. Most students learned to sing in the primary elementary grades (n = 15) and play instruments in the upper elementary years (n = 56), though some students reported starting to sing and play these instruments in middle school (n = 20) and starting instruments in high school (n = 14). No students reported starting to sing at school during the high school years. Most students (n = 59) reported they continue to sing or play their instruments at school, while eight students reported they continue to sing or play instruments, (e.g., piano, guitar, and drumset) outside of school. Among respondents, nine students reported that they started singing or playing an instrument at school, but discontinued their involvement.

Of pilot participants, 58% of students indicated they had learned to play an instrument or sing outside of school, while 42% did not. These 31 respondents reported pursuing a total of 59 instruments and voice outside of school. Voice was the most

popular musical pursuit outside of school (*n* = 17), followed by piano (*n* = 9), and guitar (*n* = 8 classical, *n* = 6 electric), and percussion (*n* = 6). Respondents also indentified six other wind instruments and four other string instruments they learned, as well as instruments not included in the survey (i.e., ukelele [*n* = 2] and harmonica [*n* = 1]). Singers started learning at a young age, primarily in the elementary grades (elementary [*n* =11], middle school [*n* = 4], high school [*n* =2]). Instrumentalists, however, began playing outside of school at all grade levels (elementary [*n* = 17], middle school [*n* = 16]), including 16 students who started playing an instrument in high school. The majority of respondents (*n* = 41) still sings or plays these instruments outside of school, while 15 had discontinued their musical pursuits.

Pilot participants reported all of the musical activities in which they participated outside of school. The majority of students (58%) reported involvement in music outside of school, while 42% reported they did not. The largest number of respondents (*n* = 21) did not make music outside of school. The majority of students (*n* = 16) reported playing instruments for fun by themselves, followed by writing songs/lyrics (*n* = 14), and playing an instrument for fun with friends (*n* = 9). Seven students indicated singing in the church choir, while four played instruments in church bands of wind and percussion instruments. Three students sang in community choirs, with one student each playing in a community concert band and community orchestra and four students participating in a family musical group. Three students reported creating music using technology, and one student each reported playing in a garage band, playing pre-recorded music as a mobile DJ, and creating music as a hip hop or electronica style DJ. Other musical activities reported by these students included singing for fun, nursing home performances, and performing in

the community theatre. The majority of school music nonparticipants were also not involved music outside of school (n = 11), while the majority of school music participants (n = 22) reported musical involvements outside of school.

Perceptions, Ability/Expectancy, Task Values and Task Difficulty ANOVAs

Perceptions and attitudes toward school music. For the analyses that follow, the researcher used Cohen's (1988) guidelines for effect sizes, where .01 was a small effect, .06 was a medium effect, and .14 was a large effect. Using the nine-item scale, the researcher conducted a one-way, between-subjects analysis of variance (ANOVA) to compare attitudes toward music between music participants and nonparticipants. There was a significant difference in attitude toward school music between school music participants and nonparticipants F (1, 51) = 31.61, p < .01. As expected, music participants held more positives attitudes about music (M = 47.38, SD = 10.44) than nonparticipants (M = 31.26, SD = 9.17). The effect size, calculated using eta squared indicated a large effect (η^2 = .38), of attitude on school music participation.

The researcher conducted a one-way, between-subjects ANOVA to compare ability/expectancy between music participants and nonparticipants. Due to the slight variation in the wording of the scale items for each group, caution should be exercised in interpreting the results that follow. There was a significant difference between school music participants and nonparticipants in the perceptions of musical ability and expectancy F (1, 49) = 22.90, p < .01. While not surprising, music participants held higher perceptions regarding their abilities and expectancies for music (M = 22.31, SD = 3.79) than nonparticipants (M = 16.05, SD = 5.55). There was a large effect size (η^2 = .38). There was also a significant difference in perceived musical task difficulty between

groups F (1, 49) = 16.07, $p < .01$. Levels of perceived task difficulty in music were higher for school music nonparticipants (M = 10.06, SD = 3.56) than participants (M = 6.52, SD = 2.68). The effect size for task difficulty on music participation was large (η^2 = .25).

The researcher compared the perceptions of music participants and nonparticipants on each of the individual subscales within perceived task values, as well as the entire scale. The researcher explored the extrinsic utility value for music as a broad construct, as well as usefulness of music in and out of school. There was a significant difference in usefulness for music between school music participants and nonparticipants F (1, 51) = 11.50, p = .001. Music participants had higher means for extrinsic utility values for music (M = 14.06, SD = 5.17) than nonparticipants (M = 9.00, SD = 5.28). There was a large effect (η^2 = .18) of usefulness of music on school music participation. There was a significant difference in extrinsic utility value for school music F (1, 50) = 18.83, $p < .01$ and music outside of school F (1, 51) = 22.25, $p < .01$ between groups. Music participants scored slightly higher mean scores for the usefulness of music outside of school (M = 5.29, SD = 1.53) than school music (M = 5.24, SD = 1.71). These scores were higher than those for school music nonparticipants, for whom means were the same for school music (M = 3.00, SD = 1.88) and music outside of school (M = 3.00, SD = 1.97). There was a large effect for both usefulness of school music (η^2 = .27) and music outside of school (η^2 = .38).

The researcher conducted one-way, between-groups ANOVAs on both the Intrinsic Interest Value and Attainment Value/Importance scales to compare values between groups for music in and outside of school. There were significant differences

between groups for both intrinsic interest values (i.e., interest) in school music F (1, 50) = 44.21, $p < .01$ and music outside of school F (1, 51) = 16.70, $p < .01$. Music participants scored means for interest in school music than nonparticipants for school music (M = 11.15, SD = 2.76) and music outside of school (M = 10.74, SD = 3.20). In addition, nonparticipants intrinsic values in music were opposite their school music peers, with higher values for music outside of school (M = 6.53, SD = 4.22) than inside of school (M = 5.05, SD = 3.82). The effect size was greater for interest in school music ($\eta^2 = .47$) than music outside of school ($\eta^2 = .25$), though both were large.

The only violation of the assumptions for ANOVA occurred in the data for attainment value/importance (i.e., importance) of music outside of school, where equal variances could not be assumed, so the researcher conducted a Welch ANOVA. There was little difference in importance between music in school and out of school between groups. Overall, music participants' importance values were nearly twice as high for both music in school (M = 16.59, SD = 3.71) and music outside of school (M = 16.28, SD = 3.50) than those of nonparticipants (school music, M = 8.47, SD = 4.87; music outside school, M = 8.74, SD = 5.89). There were significant differences between groups for importance of both school music F (1, 51) = 46.46, $p < .01$ and music outside of school, Welch's F (6, 14.06) = 5.689, $p = .003$. The effect size was large for the importance of music inside school ($\eta^2 = .47$). Because the Welch's ANOVA procedure was necessary for the data regarding the importance of music outside of school and effect sizes for the sample are not provided in SPSS, none are reported.

As expected when considering the results of the three subscales (i.e., Extrinsic Utility Value, Intrinsic Interest Value and Attainment Value/Importance subscales), the

means for the total Perceived Task Value Scale were higher for music participants than nonparticipants for both school music (music participants, $M = 46.70$, $SD = 11.90$; music nonparticipants, $M = 26.33$, $SD = 14.13$) and music outside of school (music participants, $M = 47.47$, $SD = 11.47$; music nonparticipants, $M = 27.26$, $SD = 16.37$). There were significant differences between school music participants and nonparticipants in perceived task values for both school music $F\ (1, 49) = 29.85$, $p < .01$ and music outside of school $F\ (1, 49) = 26.79$, $p < .01$. The effect sizes for perceived task values on school music participation were large for music inside ($\eta^2 = .38$) and outside of school ($\eta^2 = .36$).

Overall, high school music participants' perceptions of their musical ability, expectations for achievement, and their values for music were significantly higher than those of students who do not participate in music at school. In addition, perceptions of task difficulty for music were significantly higher for music nonparticipants than participants. These results were not surprising, as students who participate in elective music courses would be expected to feel more confident in their musical abilities, value music more, and find music easier, than students who choose not to participate in music at school. While students who did not participate in music at school valued music significantly less than students who enrolled in music courses, they were more intrinsically interested in music outside of school. Taken together, these findings suggest that perceptions of ability, the difficulty of music tasks, the value of music, and expectations for success may have a role in students' decisions to pursue music, be it enrollment in school music courses or the pursuit of music outside of school.

Constraints to School Music ANOVAs

The researcher used a one-way, between-subjects ANOVA to compare the perceptions of constraints by school music participants and nonparticipants. The researcher used Cohen's (1988) guidelines for effect sizes, where .01 was a small effect, .06 was a medium effect, and .14 was a large effect. Due to an irregularity in the survey, 10 items presented Likert-type scales with two choices numbered "3." This resulted in the responses being recorded on 8-point, rather than a 7-point, scales. However, all pilot participants responded to the same items with the same error in the scales, so the researcher decided to proceed with the analysis using the data as reported (i.e., 22 item responses recorded on 7-point scales and 11 item responses recorded on 8-point scales). The researcher calculated the total constraint score for each respondent and used the total score in the analysis. There was a significant difference in overall constraint experience music between school music participants and nonparticipants at the $p = .05$ level F (1, 51) = 27.76, $p < .01$. Music participants reported fewer total constraints to their music participation ($M = 71.38$, $SD = 28.98$) than nonparticipants ($M = 114.95$, $SD = 28.66$). There was a large effect of constraint experience ($\eta^2 = .35$) on school music participation.

In examining individual constraints between groups, mean scores varied between groups, but students experienced some of the same constraints. The majority of constraints for students enrolled in school music had mean ratings ranging from 1.47 ($SD = .99$) for "parents won't let me [participate in music]" to 3.26 ($SD = 2.56$) for "more talented in another activity," which indicated a low level of constraint. For students who chose not to participate in music at school, the lowest mean rating was for "parents won't let me [participate in music]" ($M = 1.95$, $SD = 1.99$) and the highest was for "lost

interest" (*M* = 5.53, *SD* = 1.90). This indicated constraints that were perceived to operate at a low- to mid-level of intensity. The top six constraints for school music participants were "more talented in another activity" (*M* = 3.26, *SD* = 2.56), "no time for practice outside of school," (*M* = 3.24, *SD* = 2.50), "can't do before/after school music activities" (*M* = 3.06, *SD* = 2.35), "pursuing other interests" (*M* = 3.03, *SD* = 2.62), "lack of interest" (*M* = 2.85, *SD* = 2.61), and "lack of skills/not talented" (*M* = 2.79, *SD* = 2.50). For nonparticipants, the top seven constraints were "lost interest" (*M* = 5.53, *SD* = 1.90), "wanted to take other classes that were more interesting to me" (*M* = 5.11, *SD* = 2.18), "lack of interest" (*M* = 4.79, *SD* = 1.93), "needed to take other classes to graduate" (*M* = 4.53, *SD* = 2.39), "no time to practice outside of school" (*M* = 4.53, *SD* = 2.59), and "dislike the music we learn at school" (*M* = 4.32, *SD* = 2.06). Both groups had the same mean scores for "cost" (participants, *M* = 2.41, *SD* = 1.62; nonparticipants, *M* = 2.41, *SD* = 2.08), "more talented in another activity" (participants, *M* = 3.26, *SD* = 2.56; nonparticipants, *M* = 3.26, *SD* = 2.11). The only item school music nonparticipants perceived less strongly than their music peers was " have been told that I am not a good singer" (participants, *M* = 2.26, *SD* = 1.75; nonparticipants, *M* = 2.00, *SD* = 1.37).

Students indicated three items that were among those with the highest means for both groups: no time to practice outside of school, lack of interest, and dislike for the school music. It was interesting that both groups had the same mean score for the items regarding cost and their perceptions of possessing more talent in another activity. A surprising finding was that music participants felt the constraint of being told they were not good singers more strongly than nonparticipants. Overall, these findings suggest that students who participate in music at school perceive fewer and less intense constraints

than students who do not participate in music classes, and, when faced with an obstacle, may possess greater abilities or more tools to overcome them.

The researcher conducted one-way, between-groups ANOVAs to compare the mean scores between school music participants and nonparticipants for each of the individual constraint/barrier statements. The significance level was set a priori at .05. The results revealed significant differences between groups for 17 of the 33 school music constraint items. The results of Levene's test indicated that the homogeneity of variances assumption was violated for seven constraint items. For these items, the researcher conducted a Welch's ANOVA, as described in the results that follow.

There were significant differences between groups for scheduling constraints: "wanted to take classes that were more interesting to me," F (1, 51) = 26.52, $p < .01$, $\eta^2 = .34$; "needed to take other classes to graduate," Welch's F (1, 23.00) = 19.58, $p < .001$; and "music events are scheduled at the same time as other activities or sports I do," Welch's F (1, 28.63) = 8.70, $p = .006$. There were also significant differences between groups and large effect sizes for items related to the music curriculum: "no opportunities for me to join music when ready," Welch's F (1, 24.92) = 6.61, $p = .017$; "not interested in the music classes offered," Welch's F (1, 19.02) = 21.71, $p < .001$; "dislike music we learn at school," F (1, 51) = 10.09, $p = .003$, $\eta^2 = .17$; and "teacher makes all the decisions, no student input," F (1, 51) = 11.53, $p = .001$, $\eta^2 = .18$. Significant differences between groups existed for social factors, most of which had a large effect size: "friends not involved or dropped out," F (1, 51) = 5.78, $p = .02$, $\eta^2 = .10$; "don't fit in with the music crowd," Welch's F (1, 25.17) = 6.91, $p = .014$; and "don't know anyone else in music," Welch's F (1, 25.20) = 4.72, $p = .039$. There were significant differences

between groups in regard to "family commitments," F (1, 51) = 9.66, p = .003, η^2 = .15, and "participate in sports or other activities," Welch's F (1, 26.43) = 10.18, p = .004. Other variables where significant differences existed between school music participants and nonparticipants involved personal perceptions of musicianship and interest: "lack of interest," F (1, 51) = 8.00, p = .007, η^2 = .14; "lost interest," F (1, 51) = 28.65, p < .01, η^2 = .36; "not musical or creative," F (1, 51) = 5.03, p = .03, η^2 = .09; "don't like to perform," F (1, 51) = 6.44, p = .014, η^2 = .11; and "more talented in another activity," F (1, 51) = 3.91, p = .05, η^2 = .07. Effect sizes were large for all school music constraint items except for the last two items listed above, which had medium effect sizes.

The constraints that had significant effects on enrollment in music courses between groups were for items related to personal perceptions of musical interest and skill, the influence of social factors, and school music curriculum. These levels suggest that constraints and barriers to participation in school music programs may operate on the three levels described in previous literature, which cannot be confirmed without the results of a factor analysis. While the results indicate a significant difference in the overall constraint experience of school music participants and the barrier experiences of nonparticipants, it was not possible to compare the levels at which these operated. Due to the small sample size, it was not appropriate to conduct a factor analysis on the constraint/barrier items to determine how these items grouped into factors. Therefore, the researcher determined that a comparison of the levels at which the constraints and barriers operated for each group was best left to the larger data set from the main study that followed. An examination of the way in which these constraints operate and whether

or not they do so in a hierarchical manner were important considerations for examination in the final analysis.

APPENDIX M: INTERVIEW PROTOCOL

Interview Protocol

Please tell me about your experiences with school music, starting in elementary school, moving through middle school, and to this point in high school.

Why did you decide not to participate (or discontinue your participation) in music at school in elementary/middle/high school?

In general, what do you think of school music? How have your family, friends, or others influenced how you feel about school music?

How have your family, friends, or others influenced your involvement with school music? (Whose influence is strongest?)

What have been the biggest obstacles to your participation in music at school?

How did these experiences make it harder for you to participate (or prevent you from participating) in school music?

Was there a time when you wanted to participate in music at school but felt you could not? Why not?

In the survey, students responded to items regarding their perceptions of barriers to participation in school music, which the researcher grouped into factors in the quantitative analysis. Interview participants will be given five index cards, one for each group of barriers to school music, and asked to rank the groups of barriers from most influential to least influential in their decision not to join (or to stop taking) music at school. They will then be asked the following questions: Why were these barriers the most influential? The least influential? Did any of these barriers have no effect on your participation in music at school?

What do you think would have helped you to overcome the barriers to participating in music at school?

Was there anything that the school music teacher could have done to help you stay involved in the school music program?

What changes to the school music ensembles might encourage more students to join? What changes might encourage more students to stay involved in the program?

How you are currently involved in music outside of school?

What is different between musical involvement in school and music outside of school? Why do you participate in musical activities outside of school, but not inside of school?

What would you expect from a music course at school in? (Should the courses offered focus on music students like, music students may be less familiar with, a combination?)

What music courses would you take at school if they were offered?

APPENDIX N: COVER LETTER – INTERVIEW

March 1, 2015

Dear Parent/Guardian,

My name is Jennifer Hawkinson and I am a music education doctoral student at the University of Minnesota. I am sending this letter to invite your son or daughter to participate in an interview for the research project I am conducting at Oak Valley High School. Because your student is under the age of 18 years, I am writing to ask you to consider allowing your child to participate in the interview. The interviews will take place at Oak Valley High School and will require only one hour of your child's time.

The purpose of this study is to investigate the factors that lead to students' decisions to enroll or not enroll in music at school and the barriers that high school students encounter along the way. The enclosed consent form provides a summary of the project and tells you about what students will be asked to do.

Your school district and my university require parent or guardian permission before students can participate in the interview. Participation in this study is voluntary and students may choose to discontinue their involvement at any time. There is no penalty if you decide not to allow your child to participate in the study.

I hope that you will consider allowing your child to participate in this research. I take my responsibilities for protecting the confidentiality of all the students who participate in the study very seriously. Little is known about the factors and barriers that contribute to students' decisions to enroll in music at school and I am very excited to learn more about your child's experiences. I especially look forward to learning from the students of Oak Valley High School.

Thank you for considering this request and best wishes for a great school year!

Sincerely,

Jennifer K. Hawkinson
Ph.D. Candidate, Music Education
University of Minnesota – Twin Cities

APPENDIX O: PARENTAL CONSENT – INTERVIEW

CONSENT FORM

A Mixed Methods Investigation of Student Nonparticipation in Secondary School Music

You are invited to participate in a research study about the reasons why students participate or do not participate in high school music classes. You were selected as a possible participant because you are a student at Oak Valley High School and participated in the survey. Please read this form and ask any questions you may have before agreeing to be interviewed.

This study is being conducted by: Jennifer K. Hawkinson, Music Education Department, University of Minnesota – Twin Cities

Background Information

The purpose of this study is: to identify the factors and barriers associated with student nonparticipation in high school music programs by comparing the experiences of students who participate in music at school to the experiences of those who do not.

Procedures

If you agree to participate in this study, I would ask you to do the following things:

- Participate in an interview with the researcher to share more detailed information about their experiences and decision not to take school music courses. The interviews will take place at school and the researcher will audio record the interviews for later transcription (type out everything that was said).
- The interview students will be sent the typed transcription of the interview to check for accuracy and make sure that it reflects the conversation with the researcher.

Risks and Benefits of being in the Study

There are minimal risks associated with participation in this study.

- Students selected for the interview may be slightly nervous to talk to the researcher, but every effort will be made to help the student to feel comfortable answering questions about their experiences with music. Students will be reminded at the beginning of the interview that their participation is voluntary and that they may choose not to answer any question at any time or may stop the interview if they wish.

There are no direct benefits to the student for participating in this study. I hope that the results of this study will help school music teachers and administrators better understand the experiences and needs of students not currently participating in their high school music program and will provide information that can be used to improve these programs.

Compensation: There is no compensation for participation in this study.

Confidentiality:
The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. Study data will be encrypted according to current University policy for protection of confidentiality. Student interviews will be audio recorded and only the researcher will have access to these recordings. Audio recordings will be erased after they have been transcribed. Any data from these recordings in oral and written reports will not include any information that will make it possible to identify a participant.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your relationship with your high school and will not affect your grades. In addition, your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The researcher conducting this study is: Jennifer K. Hawkinson. If you have any questions, **you are encouraged** to contact her by phone at 605-941-0344 or by email at hawki426@umn.edu. You may also contact the University of Minnesota faculty advisor for this study, Dr. Scott D. Lipscomb, at 612-624-2843 or lipscomb@umn.edu .

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

Please find an additional copy of this information enclosed to keep for your records.

Statement of Consent:
I have read the above information. I have asked questions and have received answers. I consent to participate in the interview.

Student Name (Please print)_____

Signature of Parent or Guardian:_____Date: _____
(If minors are involved)

Signature of Investigator:_____Date: _____

APPENDIX P: STUDENT ASSENT - INTERVIEW

STUDENT ASSENT – INTERVIEW

Hello! My name is Jennifer Hawkinson and I am a graduate student at the University of Minnesota. I am interested to find out what factors are involved in the decision to participate or not participate in music courses at school. Everyone has their own reasons for taking music courses (or not) and each person's individual experiences with music inside and outside of school are different from the experiences of others.

If you agree to participate in the interview for this study, you will meet individually with the researcher. You will answer questions about what you think about music, what factors went into your decision to participate or not participate in school music, and what obstacles you have faced. The interview will be audio recorded so the researcher can transcribe (type out everything that was said) it later. You will receive a copy of this transcription so you can read it over, check that it is accurate, and make any changes that you feel better reflects your intended meaning.

Participating in this study is totally up to you, and no one will be upset with you if you don't want to do it. Your decision to participate or not participate will not affect your relationship with your high school and will not affect your grades. If you agree to be in the study and change your mind later, that is fine. You can ask any questions that you have about this study. If you have a question later that you didn't think of now, you can ask me next time.

Contacts and Questions:
The researcher conducting this study is: Jennifer K. Hawkinson. If you have any questions, **you are encouraged** to contact her by phone at 605-941-0344 or by email at hawki426@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

Signing here means that you have read the above statement or had it read to you and that all of your questions have been answered. If you don't want to be in this interview, don't sign. Remember that being in this study is up to you and no one will be mad at you if you don't sign this or if you change your mind later.

Signature of participant_____Date_____

Signature of person explaining study_____Date_____

APPENDIX Q: STRUCTURE MATRIX FOR THREE-FACTOR SOLUTION

Structure Matrix for PCA with Direct Oblimin Rotation of Three-Factor Solution of 33 School Music Constraint Items

Item	Structure Coefficients			Commu-nalities
	Components			
	1	2	3	
Lack of interest	**.800**	.232	.307	.654
Lost interest	**.779**	.190	.383	.645
Not interested in the music classes offered	**.776**	.231	.306	.614
Don't fit in with the music crowd	**.748**	**.487**	.292	.596
Dislike the music we learn at school	**.716**	.284	.319	.517
Lack of skills/not talented	**.704**	**.430**	.056	.565
Wanted to take other classes that were more interesting to me	**.701**	.151	.481	.584
Not musical or creative	**.664**	.393	.046	.501
More talented in another activity	**.650**	.173	**.624**	.618
Don't like to perform	**.650**	.382	.150	.446
Don't know anyone else in it	**.633**	**.499**	.163	.473
Not a cool activity to be in	**.631**	.294	**.428**	.446
Pursuing other interests	**.615**	.249	**.562**	.515
Don't like the school music teacher	**.541**	.331	.301	.318
Would rather create my own music than play/sing someone else's	**.487**	.303	.190	.249
Friends not involved or dropped out	**.484**	**.454**	**.402**	.363
Needed to take other classes to graduate	**.472**	**.413**	.357	.314
I learn better in an individual	**.427**	**.408**	.266	.257

setting than a group setting				
Could not get an instrument	**.401**	**.775**	.114	.613
Family not supportive of musical participation	.307	**.772**	.182	.598
Cost	.298	**.687**	.020	.489
Family commitments	.234	**.673**	.270	.481
Parents won't let me	.192	**.672**	.177	.467
No opportunities for me to join music when I was ready	**.446**	**.670**	.196	.482
Transportation issues	.306	**.660**	.136	.436
Have been told I am not good at music	**.455**	**.552**	.116	.371
Teacher makes all the decisions, no student input	**.516**	**.538**	.199	.392
Work commitments	**.432**	**.522**	.318	.351
Friends not supportive of musical participation	.240	**.465**	**.431**	.338
Music events are scheduled at the same time as other activities or sports I do	.330	.290	**.826**	.698
Participate in sports or other activities	.299	.113	**.812**	.663
No time to practice outside of school	**.452**	.389	**.679**	.547
Can't do before/after school music activities	**.463**	**.439**	**.583**	.473

Note: Item loadings above .40 are bolded.

APPENDIX R: PATTERN MATRIX FOR THREE-FACTOR SOLUTION

Pattern Matrix for PCA with Direct Oblimin Rotation of Three-Factor Solution of 33 School Music Constraint Items

Item	Pattern Coefficients		
	Components		
	1	2	3
Lack of interest	**.843**	- .129	.033
Not interested in the music classes offered	**.811**	- .119	.041
Lost interest	**.807**	- .176	.131
Lack of skills/not talented	**.712**	.178	- .233
Dislike the music we learn at school	**.700**	- .025	.075
Wanted to take other classes that were more interesting to me	**.684**	- .193	.277
Not musical or creative	**.680**	.152	- .227
Don't fit in with the music crowd	**.654**	.208	.017
Don't like to perform	**.628**	.138	- .102
More talented in another activity	**.550**	- .151	**.459**
Don't know anyone else in it	**.544**	.288	- .089
Not a cool activity to be in	**.540**	.020	.232
Pursuing other interests	**.490**	- .037	.395
Don't like the school music teacher	**.449**	.119	.118
Would rather create my own music than play/sing someone else's	**.433**	.119	.012
Needed to take other classes to graduate	.296	.248	.201
I learn better in an individual setting than a group setting	.273	.271	.114
Family not supportive of musical participation	- .034	**.779**	.037
Could not get an instrument	.116	**.742**	- .077

Parents won't let me	- .137	**.713**	.081
Cost	.056	**.692**	- .140
Family commitments	- .116	**.687**	.172
Transportation issues	.037	**.646**	- .008
No opportunities for me to join music when I was ready	.196	**.586**	.008
Have been told I am not good at music	.297	**.443**	- .080
Friends not supportive of musical participation	- .068	**.418**	.371
Work commitments	.205	**.403**	.164
Teacher makes all the decisions, no student input	.355	.390	- .007
Friends not involved or dropped out	.275	.288	.246
Participate in sports or other activities	.039	- .068	**.812**
Music events are scheduled at the same time as other activities or sports I do	- .011	.132	**.803**
No time to practice outside of school	.159	.205	**.581**
Can't do before/after school music activities	.186	.267	**.463**

Note: Item loadings above .40 are bolded.

APPENDIX S: STRUCTRUE MATRIX FOR FOUR-FACTOR SOLUTION

Structure Matrix for PCA with Direct Oblimin Rotation of Four-Factor Solution of 33 School Music Constraint Items

Item	Structure Coefficients				Commu-nalities
	Components				
	1	2	3	4	
Lack of interest	**.804**	.239	.387	.284	.665
Lost interest	**.772**	.184	**.450**	.310	.650
Not interested in the music classes offered	**.758**	.200	.354	.391	.616
Lack of skills/not talented	**.727**	**.474**	.157	.190	.615
Wanted to take other classes that were more interesting to me	**.699**	.177	**.565**	.186	.629
Don't fit in with the music crowd	**.687**	**.430**	.313	**.548**	.613
Not musical or creative	**.670**	**.402**	.116	.274	.507
Dislike the music we learn at school	**.663**	.213	.327	**.523**	.561
Don't like to perform	**.655**	**.408**	.230	.220	.474
Don't know anyone else in it	**.572**	**.434**	.167	**.538**	.510
Could not get an instrument	.345	**.797**	.160	.296	.645
Cost	.264	**.728**	.073	.176	.542
Family not supportive of musical participation	.193	**.714**	.155	**.521**	.616
Transportation issues	.265	**.703**	.190	.168	.505
Family commitments	.144	**.664**	.274	.324	.487
Parents won't let me	.104	**.657**	.173	.325	.469
No opportunities for me to join music when I was ready	.353	**.615**	.186	**.519**	.499
Have been told I am not good at music	**.417**	**.554**	.154	.299	.377
Work commitments	.389	**.551**	.374	.214	.402

Needed to take other classes to graduate	**.437**	**.438**	**.414**	.203	.358
Participate in sports or other activities	.203	.078	**.803**	.278	.664
Music events are scheduled at the same time as other activities or sports I do	.202	.232	**.798**	**.417**	.700
No time to practice outside of school	.384	**.415**	**.732**	.209	.625
More talented in another activity	**.598**	.148	**.660**	.347	.619
Pursuing other interests	**.593**	.285	**.642**	.170	.593
Can't do before/after school music activities	.392	**.448**	**.624**	.274	.511
Friends not involved or dropped out	.349	.314	.329	**.732**	.566
Friends not supportive of musical participation	.083	.324	.332	**.677**	.536
Teacher makes all the decisions, no student input	**.416**	**.433**	.158	**.645**	.509
Not a cool activity to be in	**.544**	.193	**.403**	**.601**	.538
Don't like the school music teacher	**.473**	.262	.293	**.485**	.357
I learn better in an individual setting than a group setting	.346	.338	.244	**.479**	.297
Would rather create my own music than play/sing someone else's	**.432**	.237	.180	**.444**	.293

Note: Item loadings above .40 are bolded.

APPENDIX T: PATTERN MATRIX FOR FOUR-FACTOR SOLUTION

Pattern Matrix for PCA with Direct Oblimin Rotation of Four-Factor Solution of 33 School Music Constraint Items

Item	Pattern Coefficients			
	Components			
	1	2	3	4
Lack of interest	**.766**	- .040	.138	.020
Lost interest	**.714**	- .108	.220	.063
Not interested in the music classes offered	**.703**	- .102	.096	.178
Lack of skills/not talented	**.696**	.306	- .106	- .101
Not musical or creative	**.636**	.214	- .147	.043
Wanted to take other classes that were more interesting to me	**.619**	- .070	**.400**	- .091
Don't like to perform	**.594**	.232	.000	- .043
Dislike the music we learn at school	**.559**	- .098	.068	.361
Don't fit in with the music crowd	**.528**	.150	.024	.326
Don't know anyone else in it	**.429**	.199	- .110	.367
Could not get an instrument	.104	**.763**	- .030	.021
Cost	.075	**.742**	- .080	- .070
Transportation issues	.049	**.706**	.059	- .094
Parents won't let me	- .171	**.650**	.061	.150
Family commitments	- .153	**.641**	.166	.119
Family not supportive of musical participation	- .114	**.640**	- .028	.355
No opportunities for me to join music when I was ready	.104	**.477**	- .032	.338
Work commitments	.180	**.465**	.238	- .058
Have been told I am not good at music	.260	**.453**	- .042	.080

Needed to take other classes to graduate	.261	.318	.281	- .057
Participate in sports or other activities	- .070	- .099	**.814**	.118
Music events are scheduled at the same time as other activities or sports I do	- .143	.045	**.772**	.244
No time to practice outside of school	.104	.280	**.666**	- .091
Can't do before/after school music activities	.122	.306	**.524**	- .003
Pursuing other interests	**.437**	.086	**.516**	- .131
More talented in another activity	**.435**	- .131	**.512**	.118
Friends not involved or dropped out	.088	.047	.117	**.658**
Friends not supportive of musical participation	- .237	.146	.210	**.648**
Teacher makes all the decisions, no student input	.212	.209	- .094	**.535**
Not a cool activity to be in	.373	- .116	.179	**.475**
I learn better in an individual setting than a group setting	.162	.155	.065	.360
Don't like the school music teacher	.326	.025	.088	.351
Would rather create my own music than play/sing someone else's	.324	.026	-.021	.338

Note: Item loadings above .40 are bolded.

APPENDIX U: CORRELATIONS FOR SCHOOL CONSTRAINT ITEMS 1-10

Correlations Between School Music Constraint Items (Items 1-10)

	Cost	Transportation issues	Lack of skills/ not talented	Lack of interest	Not musical or creative	Don't like to perform	Pursuing other interests	More talented in another activity	No time to practice out-side of school	Can't do before/ after school music activities
Cost	1.000	.563	.287	.172	.230	.297	.207	.121	.281	.307
Transportation issues	.563	1.000	.314	.208	.188	.335	.223	.133	.309	.433
Lack of skills/not talented	.287	.314	1.000	.531	.610	.457	.378	.362	.253	.299
Lack of interest	.172	.208	.531	1.000	.528	.510	.527	.472	.410	.364
Not musical or creative	.230	.188	.610	.528	1.000	.393	.350	.343	.222	.269
Don't like to perform	.297	.335	.457	.510	.393	1.000	.353	.361	.382	.306
Pursuing other interests	.207	.223	.378	.527	.350	.353	1.000	.543	.493	.462
More talented in another activity	.121	.133	.362	.472	.343	.361	.543	1.000	.443	.384
No time to practice outside of school	.281	.309	.253	.410	.222	.382	.493	.443	1.000	.558
Can't do before/after school music activities	.307	.433	.299	.364	.269	.306	.462	.384	.558	1.000

Correlations Between School Music Constraint Items (Items 1-10 with items 11-20)

	Lost interest	Don't like the school music teacher	Parents won't let me	Family commitments	Don't fit in with the music crowd	Participate in sports or other activities	Family not supportive of musical participation	Wanted to take other classes that were more interesting to me	No opportunities for me to join when I was ready	Music activities are scheduled at the same time as other activities or sports I do
Cost	.137	.202	.365	.356	.347	- .006	.385	.112	.355	.098
Transportation issues	.204	.243	.291	.424	.321	.027	.341	.127	.326	.221
Lack of skills/not talented	.492	.281	.216	.247	.526	.120	.286	.415	.339	.162
Lack of interest	.720	.318	.155	.178	.499	.276	.212	.560	.231	.219
Not musical or creative	.417	.294	.218	.260	.483	.141	.346	.358	.261	.110
Don't like to perform	.464	.318	.150	.251	.511	.116	.253	.367	.332	.198
Pursuing other interests	.548	.324	.168	.226	.406	.392	.165	.604	.250	.396
More talented in another activity	.502	.339	.109	.130	.508	.525	.177	.574	.265	.490
No time to practice outside of school	.415	.232	.216	.301	.332	.452	.239	.390	.284	.515
Can't do before/after school music activities	.393	.286	.260	.293	.361	.383	.266	.360	.285	.428

Correlations Between School Music Constraint Items (Items 1-10 with items 21-29)

	Could not get an instrument	Not interested in the music classes offered	Dislike the music we learn at school	Would rather create my own music than play/sing someone else's	Have been told I am not good at music	Friends not involved or dropped out	Friends not support-ive of musical participation	Teacher makes all the decisions, no student input	I learn better in an individual setting than a group setting
Cost	.599	.200	.169	.208	.332	.200	.183	.307	.257
Transportation issues	.520	.162	.210	.194	.308	.243	.209	.308	.229
Lack of skills/not talented	.406	.459	.393	.239	.508	.270	.181	.301	.197
Lack of interest	.244	.605	.492	.338	.289	.354	.199	.294	.308
Not musical or creative	.351	.436	.319	.271	.388	.318	.158	.349	.219
Don't like to perform	.321	.399	.393	.278	.346	.243	.142	.251	.323
Pursuing other interests	.300	.383	.373	.255	.218	.311	.160	.276	.273
More talented in another activity	.195	.530	.454	.280	.225	.351	.192	.283	.295
No time to practice outside of school	.317	.294	.353	.227	.284	.308	.265	.239	.300
Can't do before/after school music activities	.337	.325	.343	.306	.218	.308	.281	.293	.255

APPENDIX V: CORRELATIONS FOR SCHOOL CONSTRAINT ITEMS 11-20

Correlations Between School Music Constraint Items (Items 11-20 with items 1-10)

	Cost	Transportation issues	Lack of skills/not talented	Lack of interest	Not musical or creative	Don't like to perform	Pursuing other interests	More talented in another activity	No time to practice out-side of school	Can't do before/ after school music activities
Lost interest	.137	.204	.492	.720	.417	.464	.548	.502	.415	.393
Don't like the school music teacher	.202	.243	.281	.318	.294	.318	.324	.339	.232	.286
Parents won't let me	.365	.291	.216	.155	.218	.150	.168	.109	.216	.260
Family commitments	.356	.424	.247	.178	.260	.251	.226	.130	.301	.293
Don't fit in with the music crowd	.347	.321	.526	.499	.483	.511	.406	.508	.332	.361
Participate in sports or other activities	- .006	.027	.120	.276	.141	.116	.392	.525	.452	.383
Family not supportive of musical participation	.385	.341	.286	.212	.346	.253	.165	.177	.239	.266
Wanted to take other classes that were more interesting to me	.112	.127	.415	.560	.358	.367	.604	.574	.390	.360
No opportunities for me to join music when I was ready	.355	.326	.339	.231	.261	.332	.250	.265	.284	.285
Music events are scheduled at the same time as other activities or sports I do	.098	.221	.162	.219	.110	.198	.396	.490	.515	.428

Correlations Between School Music Constraint Items (Items 11-20)

	Lost interest	Don't like the school music teacher	Parents won't let me	Family commitments	Don't fit in with the music crowd	Participate in sports or other activities	Family not supportive of musical participation	Wanted to take other classes that were more interesting to me	No opportunities for me to join when I was ready	Music activities are scheduled at the same time as other activities or sports I do
Lost interest	1.000	.406	.146	.185	.482	.272	.178	.623	.230	.284
Don't like the school music teacher	.406	1.000	.173	.174	.407	.236	.280	.374	.316	.330
Parents won't let me	.146	.173	1.000	.434	.256	.121	.661	.161	.415	.186
Family commitments	.185	.174	.434	1.000	.272	.204	.521	.148	.415	.287
Don't fit in with the music crowd	.482	.407	.256	.272	1.000	.285	.353	.409	.439	.317
Participate in sports or other activities	.272	.236	.121	.204	.285	1.000	.125	.366	.113	.648
Family not supportive of musical participation	.178	.280	.661	.521	.353	.125	1.000	.145	.470	.219
Wanted to take other classes that were more interesting to me	.623	.374	.161	.148	.409	.366	.145	1.000	.250	.342
No opportunities for me to join music when I was ready	.230	.316	.415	.415	.439	.113	.470	.250	1.000	.280
Music events are scheduled at the same time as other activities or sports I do	.284	.330	0.186	.287	.317	.648	.219	.342	.280	1.000

Correlations Between School Music Constraint Items (Items 11-20 with items 21-29)

	Could not get an instrument	Not interested in the music classes offered	Dislike the music we learn at school	Would rather create my own music than play/sing someone else's	Have been told I am not good at music	Friends not involved or dropped out	Friends not support-ive of musical participation	Teacher makes all the decisions, no student input	I learn better in an individual setting than a group setting
Lost interest	.159	.573	.527	.299	.258	.342	.219	.298	.294
Don't like the school music teacher	.271	.393	.465	.215	.256	.292	.173	.459	.281
Parents won't let me	.440	.132	.071	.167	.273	.211	.263	.243	.213
Family commitments	.400	.135	.165	.172	.343	.283	.309	.286	.214
Don't fit in with the music crowd	.423	.559	.484	.358	.352	.436	.304	.421	.333
Participate in sports or other activities	.120	.315	.216	.107	.137	.269	.247	.155	.154
Family not supportive of musical participation	.522	.199	.229	.180	.409	.372	.409	.388	.254
Wanted to take other classes that were more interesting to me	.183	.555	.432	.276	.234	.258	.121	.234	.260
No opportunities for me to join music when I was ready	.534	.311	.378	.321	.358	.299	.282	.467	.340
Music events are scheduled at the same time as other activities or sports I do	.197	.307	.361	.219	.195	.309	.374	.229	.261

APPENDIX W: CORRELATIONS FOR SCHOOL CONSTRAINT ITEMS 20-29

Correlations Between School Music Constraint Items (Items 20-29 with items 1-10)

	Cost	Transportation issues	Lack of skills/ not talented	Lack of interest	Not musical or creative	Don't like to perform	Pursuing other interests	More talented in another activity	No time to practice outside of school	Can't do before/ after school music activities
Could not get an instrument	.599	.520	.406	.244	.351	.321	.300	.195	.317	.337
Not interested in the music classes offered	.200	.162	.459	.605	.436	.399	.383	.530	.294	.325
Dislike the music we learn at school	.169	.210	.393	.492	.319	.393	.373	.454	.353	.343
Would rather create my own music than play/sing someone else's	.208	.194	.239	.338	.271	.278	.255	.280	.227	.306
Have been told I am not good at music	.332	.308	.508	.289	.388	.346	.218	.225	.284	.218
Friends not involved or dropped out	.200	.243	.270	.354	.318	.243	.311	.351	.308	.308
Friends not supportive of musical participation	.183	.209	.181	.199	.158	.142	.160	.192	.265	.281
Teacher makes all the decisions, no student input	.307	.308	.301	.294	.349	.251	.276	.283	.239	.293
I learn better in an individual setting than a group setting	.257	.229	.197	.308	.219	.323	.273	.295	.300	.255

Correlations Between School Music Constraint Items (Items 20 – 29 with items 11-20)

	Lost interest	Don't like the school music teacher	Parents won't let me	Family commitments	Don't fit in with the music crowd	Participate in sports or other activities	Family not supp-ortive of musical participation	Wanted to take other classes that were more interesting to me	No opportunities for me to join when I was ready	Music activities are scheduled at the same time as other actiities or sports I do
Could not get an instrument	.159	.271	.440	.400	.423	.120	.522	.183	.534	.197
Not interested in the music classes offered	.573	.393	.132	.135	.559	.315	.199	.555	.311	.307
Dislike the music we learn at school	.527	.465	.071	.165	.484	.216	.229	.432	.378	.361
Would rather create my own music than play/sing someone else's	.299	.215	.167	.172	.358	.107	.180	.276	.321	.219
Have been told I am not good at music	.258	.256	.273	.343	.352	.137	.409	.234	.358	.195
Friends not involved or dropped out	.342	.292	.211	.283	.436	.269	.372	.258	.299	.309
Friends not supportive of musical participation	.219	.173	.263	.309	.304	.247	.409	.121	.282	.374
Teacher makes all the decisions, no student input	.298	.459	.243	.286	.421	.155	.388	.234	.467	.229
I learn better in an individual setting than a group setting	.294	.281	.213	.214	.333	.154	.254	.260	.340	.261

Correlations Between School Music Constraint Items (Items 20-29)

	Could not get an instrument	Not interested in the music classes offered	Dislike the music we learn at school	Would rather create my own music than play /sing someone else's	Have been told I am not good at music	Friends not involved or dropped out	Friends not supportive of musical partici-pation	Teacher makes all the decisions no student input	I learn better in an individual setting than a group setting
Could not get an instrument	1.000	.271	.260	.225	.341	.295	.212	.419	.293
Not interested in the music classes offered	.271	1.000	.645	.400	.302	.310	.169	.346	.242
Dislike the music we learn at school	.260	.645	1.000	.428	.289	.403	.181	.485	.285
Would rather create my own music than play/sing someone else's	.225	.400	.428	1.000	.198	.297	.169	.395	.337
Have been told I am not good at music	.341	.302	.289	.198	1.000	.286	.297	.283	.271
Friends not involved or dropped out	.295	.310	.403	.297	.286	1.000	.534	.396	.308
Friends not supportive of musical participation	.212	.169	.181	.169	.297	.534	1.000	.272	.225
Teacher makes all the decisions, no student input	.419	.346	.485	.395	.283	.396	.272	1.000	.412
I learn better in an individual setting than a group setting	.293	.242	.285	.337	.271	.308	.225	.412	1.000

APPENDIX X: INTERACTIONS TESTED FOR LOGISTIC REGRESSION MODEL

Significance Levels for Interaction Terms Tested in Main Effects Model

Interaction Terms	*p*-value
Race/ethnicity * Free/reduced lunch * Attitudes toward school music * Musical task difficulty	.692
Race/ethnicity * Free/reduced lunch * Attitudes toward school music	.385
Race/ethnicity * Free/reduced lunch * Musical task difficulty	.539
Race/ethnicity * Attitudes toward school music * Musical task difficulty	.984
Free/reduced lunch * Attitudes toward school music * Musical task difficulty	.528
Race/ethnicity * Free/reduced lunch	.421
Race/ethnicity * Attitudes toward school music	.305
Race/ethnicity * Musical task difficulty	.838
Free/reduced lunch * Attitudes toward school music	.705
Free/reduced lunch * Musical task difficulty	.910
Attitudes toward school music * Musical task difficulty	.120
Race/ethnicity * Personal perception constraints * Conflicting activity constraints * School music structure constraints	.581
Race/ethnicity * Personal perception constraints * Conflicting activity constraints	.906
Race/ethnicity * Personal perception constraints * School music structure constraints	.452
Race/ethnicity * Conflicting activity constraints * School music structure constraints	.264
Personal perception constraints * Conflicting activity constraints * School music structure constraints	.543
Race/ethnicity * Personal perception constraints	.388
Race/ethnicity * Conflicting activity constraints	.602
Race/ethnicity * School music structure constraints	.546
Personal perception constraints * Conflicting activity constraints	.914
Personal perception constraints * School music structure constraints	.114
Conflicting activity constraints * School music structure constraints	.826

Free/reduced lunch * Personal perception constraints * Conflicting activity constraints * School music structure constraints	.539
Free/reduced lunch * Personal perception constraints * Conflicting activity constraints	.631
Free/reduced lunch * Personal perception constraints * School music structure constraints	.578
Free/reduced lunch * Conflicting activity constraints * School music structure constraints	.797
Free/reduced lunch * Personal perception constraints	.711
Free/reduced lunch * Conflicting activity constraints	.524
Free/reduced lunch * School music structure constraints	.752
Attitudes toward school music * Musical task difficulty * Personal perception constraints * School music structure constraints	.338
Attitudes toward school music * Musical task difficulty * Personal perception constraints	.118
Attitudes toward school music * Musical task difficulty * School music structure constraints	.765
Attitudes toward school music * Personal perception constraints * School music structure constraints	.080
Musical task difficulty * Personal perception constraints * School music structure constraints	.419
Attitudes toward school music * Musical task difficulty	.120
Attitudes toward school music * Personal perception constraints	.964
Attitudes toward school music * School music structure constraints	.375
Musical task difficulty * Personal perception constraints	.074
Musical task difficulty * School music structure constraints	.389
Personal perception constraints * School music structure constraints	.114